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Rorschach "Card-Pull" in a Normal Adolescent Population[1]

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This article is the second in a series to be presented on the analysis of Rorschach protocols from a "normal" population of adolescent boys and girls.[4] The first normative article (8) presented the analysis of Rorschach variables with respect to frequency of scores, age trends, and sex differences. This normative material showed differentiated responses to the stimulus material of the different cards and suggested inspecting the Rorschach protocols from the point of view of what may be called "card-pull." "Card-pull" in this paper is defined as those properties of the ink-blot which seem to predispose the subject to the use of certain aspects of the blot. It is essential to the interpretation of projective data to determine, as Rosenzweig (10, p. 478) points out, "how far the structure of the stimulus has affected the response and how far some personal idiom has prevailed"—in short, what is stimulus-determined and what the individual projects of himself. While extensive work with the Rorschach gives the individual interpreter a "feeling" for what variables are common or uncommon in each card, this personal experience needs to be supplemented by definitive frequency information derived from a variety of samples. These data are offered as a supplement to and a check on the private norms which clinicians have established in their individual work.

For example, the interpreting clinician gives different weight to movement response in Cards III and VII than he gives to M's in other cards because he has accumulated the knowledge that the qualities of these cards apparently contribute to a high frequency

[1]Clerical work and statistical analyses were made available by a grant-in-aid from the U. S. Public Health Service. The study proper was made possible by funds from the Laura Spelman Fund, the General Education Board, and the Rockefeller Foundation.

[2]Formerly McFate.

[3]The authors wish to express appreciation to J. W. Macfarlane for her encouragement and advice, to Lucile Allen and Margaret Snyder for administration and scoring of some of the records, and to Elma L. Day, William F. McCormack, and Ellen Ulery for statistical assistance.

[4]These children were the subjects of an 18-year longitudinal study at the Institute of Child Welfare at the University of California. For a complete description of the sample, see J. W. Macfarlane (7).

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of M responses. This would mean that card-pull for M on Cards III and VII is high. Conversely, the card-pull for M on two other cards may be low, and, therefore, the M projected into these latter cards by a patient carries a different meaning.

There is another aspect of card-pull of interpretive interest to the clinician. When the examiner is aware of the pull potential of a given card in respect to many variables, he has a better basis for judging the patient's capacity or incapacity to respond to the specific stimulus of the card. For example, if we know that Cards IV and VI produce the greatest number of texture responses, we have a better basis for judging the meaning of the subject's acceptance or rejection of this variable on these cards.

Very little work has been done on a card-by-card analysis of Rorschach categories. There are exceptions to this general trend in the case of isolated variables. Joan Swift reports frequency of responses, rejections, and popular responses by card in the records of preschool children (11). Marguerite Hertz has published the frequency of responses and location categories by card for six- and eight-year-old children (5). Both Beck (1) and Hertz (4) have done extensive work on the establishment of the most frequently used large details (D) in each of the cards and have published numbered location maps.

Harrower-Erickson (3) has drawn card-pull psychograms for determinants on each card based on group administration of the test to college students and psychotics. However, since the method of group administration is so different, it does not seem safe to use these as norms for Rorschach protocols individually administered.

Sample and Procedures

The population from which our card-pull data were obtained can be considered "normal" since it was assembled by arbitrarily selecting every third child from the Birth Certificate Registry of Berkeley, California, over an 18-month period.[5] Our total Rorschach sample consists of 194 adolescents, a subsample of the total study population. Comparison with other data indicates that this subsample does not differ from the total sample in any significant way. The children were intensively studied by means of physical measurements, tests, and interviews over an 18-year period. The Rorschach test was administered first when the children were 11 years old and was given at regular intervals through age 18.

The sample on which we are presenting data consists of the same children at different age levels with a few exceptions. The

[5]The chief measured ways in which it varied from a representative sample were that the parents of the children were above average in occupational and educational status, and in its locale—a western, urban, university community.

fact that a few of the children missed testing periods or were given extra Rorschachs "out of phase" accounts for our different N at different ages.

The total sample was divided into two groups for testing purposes. Two-thirds of the group (Series A) were given the Rorschach at ages 11, 13, and 15. One-third of the total group (Series B) were given the Rorschach at ages 12, 14, and 16. All children were given the test at age 18. This division was made solely on the basis of birthdate, the eldest third of the group constituting Series B. The purpose of splitting the sample in this way was to provide a small separate group for the confirmation of tendencies appearing in the larger group. This expectation, however, has not been borne out in our experiences with this aspect of the data analysis. The small N of Series B seems to have resulted in less clear-cut results on all measurements at a given age and less stability of measurements through time. For this reason, the greatest emphasis will be laid upon Series A in this and subsequent Rorschach articles since greater confidence may be placed in the larger N. The Series B results will be presented at the end of the article without comment so that the deviations from Series A may be observed. Since all of the children were tested at or near their 18th birthday, our N for this age combines both groups and will be presented with the 11, 13, 15 series.[6]

The records were administered and scored according to Bruno Klopfer's scoring system as propounded in 1939. The changes made in this system with regard to scoring principles have, in the interests of longitudinal consistency, been ignored insofar as possible. The major change which may make our data inapplicable to present-day administration is the one concerning differentiation between Fc and cF. When we began our Rorschach scoring, Fc was "texture modified by form." The present concept of "internally differentiated" texture was then score cF. This difference is handled for the purposes of card-pull by summing Fc and cF scores. All records were conference scored, with never fewer than two workers scoring any given record.

STATISTICAL METHODS

The card-pull data are presented in terms of the per cent of each scoring variable based on the total number of responses to each card. These per cents were compared *within each card* to

[6]The actual N's are as follows:

	Series A				*Series B*		
	11	13	15	18	12	14	16
Boys	55	62	54	70	36	25	21
Girls	56	60	52	75	47	35	25

obtain the variable rank by card and *among the cards* to obtain the card rank for each variable.

The computation of critical ratios in testing the significance of the differences between the per cents on which the ranks were based was by means of the Edgerton and Paterson tables of the standard errors of percentages (2).

Results

These data are primarily normative; therefore, the results will be presented in some detail. Tables I through X present the ranks of the variables for each of the ten cards. That is, table I shows the per cent of the total responses to Card I which were scored as W, D, F, etc., at each age and for both sexes. Thus these tables provide the basic data for the discussion of variable rank by card.

Not all of the rank differences were subjected to statistical test, but only those which were psychologically meaningful for card-pull and those which seemed by inspection large enough to be significant. The brackets on all of the tables indicate split ranks.

A. *Variable Rank by Card*

In tables I through X, *adjacent rank* differences which are significant at the 1% level of confidence are indicated by bold type for the larger of the two per cents. *Non-adjacent* significant differences are entered at the end of the appropriate column. Those adjacent rank differences which were tested and found to be non-significant are indicated by an asterisk after the larger per cent. Non-adjacent differences which are non-significant are entered at the end of the column with an asterisk.

On the five colored cards an additional item was added by combining FC and CF into a total "color-pull" per cent for comparison with the other determinants. Where the significance of this color-pull was tested, the results are entered in the table. The total color-pull data are indicated on the tables by the symbol CΣ.

The R key which follows shows the number of responses given to each card by boys and girls at each of the four age levels in

R Key—Number of Responses by Each Group for Each Card

	Age 11		Age 13		Age 15		Age 18	
	Boys N=55	Girls N=56	Boys N=62	Girls N=60	Boys N=54	Girls N=52	Boys N=70	Girls N=75
Card								
I	81	77	89	84	86	100	138	176
II	77	69	94	85	94	96	126	169
III	84	84	103	99	108	106	151	188
IV	81	74	85	90	82	100	129	162
V	82	84	83	79	75	88	109	139
VI	57	74	78	80	75	85	108	147
VII	72	88	88	79	86	92	106	145
VIII	97	106	97	97	103	111	131	161
IX	69	98	87	91	84	95	134	174
X	155	200	171	234	179	223	255	373

Series A. These data are introduced here as basic to all of the card-pull data to follow, since the N on which each per cent is based is the *number of responses to the card* rather than the number of subjects tested. Although we are not presenting data on all of the determinants and contents, the per cents for those included are based on the total responses per card.

CARD I

W is by far the most frequently used location category to Card I. The difference between it and the second rank is significant at the 1% level for all ages and both sexes with the exception of the 18-year-old girls. D is next in rank, but at no time is it significantly higher than the other detail locations. White space is so seldom used that it occupies fifth rank consistently with 00% in five of the eight groups.

F is the outstanding determinant in Card I. After age 11, M is the second most frequently used determinant for both boys and

TABLE I—Per Cent of Each Variable Based on Total Responses to *Card I*[1]

	11 Years				13 Years				15 Years				18 Years			
Locations	Boys		Girls		Boys		Girls		Boys		Girls		Boys		Girls	
Rank		%		%		%		%		%		%		%		%
1	**W**	**72**	**W**	**68**	**W**	**69**	**W**	**75**	**W**	**63**	**W**	**51**	**W**	**59**	**W**	**37***
2	Dd	16*	D	19*	D	17*	D	13*	Dd	22*	D	20	D	20	D	26*
3	D	07	Dd	08	Dd	08	Dd	08	D	12	Dd	20	Dd	13	Dd	19
4	d	04	d	06	d	04	d	04	d	03	d	09	d	07	d	14
5	S	01	S	00	S	01	S	00	S	00	S	00	S	00	S	03
Determinants Rank																
1	**F**	**47**	**F**	**44**	**F**	**73**	**F**	**57**	**F**	**66**	**F**	**65**	**F**	**78**	**F**	**69**
2	FM	25	FM	19	M	11	M	21*	M	12	M	18	M	14	**M**	**16**
3	M	14	M	19	FM	09	FM	08	FM	10	FM	08	FM	05	FM	06
4	c[2]	09	c	08	c	06	c	06	c	03	c	05	c	01	c	03
Content Rank																
1	**A**	**40**	A	36*	A	36*	A	31*	**A**	**43**	A	32*	A	36*	A	28*
2	Ad	21	Ad	22	Ad	25	H	26*	Ad	21	H	20	Ad	25	H	23
3	H	15	H	17	H	13	Ad	15	H	09	Ad	17	H	14	Hd	18
4	Hd	06	Hd	08	Hd	04	Hd	06	Hd	05	Hd	12	Hd	08	Ad	15

Bold Type indicates significant difference between adjacent ranks
* Non-significant difference between adjacent ranks
[1]The absence of **Bold Type** or * indicates that adjacent rank differences were not tested.
[2]Fc+cF in all tabled data

girls. This trend is consistent, but only for the 18-year-old girls is M significantly higher than the third in rank. Texture is consistently the least used determinant of those reported.

A is the most frequently used content category but is significantly higher than the next in rank for only 13- and 15-year-old boys.

It would seem, then, that responses to Card I are most frequently of the W, F, A variety.

CARD II

Again, to Card II, W is used significantly more frequently in

seven of the eight groups reported. After age 11, D is significantly higher in rank than the remaining three location categories. S is either in third or fourth rank in all but one group although its difference from the other lesser used location categories is not significant.

The picture in regard to determinants is less clear in four of the eight groups. At ages 11 and 13 there are no significant differences within the first three ranks, the positions of F, FM, and M varying within these ranks. After age 13 the ranks are consistent

TABLE II—Per Cent of Each Variable Based on Total Responses to *Card II*[1]

	11 Years				13 Years				15 Years				18 Years			
Locations	Boys	%	Girls	%	Boys	%	Girls	%	Boys	%	Girls	%	Boys	%	Girls	%
Rank																
1	**W**	**53**	**W**	**70**	**W**	**62**	**W**	**61**	**W**	**55**	**W**	**50**	**W**	**57**	W	46*
2	D	21*	D	14	**D**	**27**	**D**	**27**	**D**	**29**	**D**	**32**	**D**	**21**	**D**	**36**
3	Dd	09}	S	09	S	05	S	07	d	09	d	07	Dd	09	S	07
4	S	09}	d	06	Dd	04	Dd	04	S	05	S	05}	d	08	Dd	05}
5	d	05	Dd	01	d	02	d	01	Dd	02	Dd	05}	S	06	d	05}
Determinants																
Rank																
1	FM	29	M	26	F	33*	M	31*	**F**	**39**	F	34*	**F**	**53**	**F**	**38**
2	F	21	FM	23	FM	19	F	25*	M	22*	M	24*	**M**	**22**	**M**	**24**
3	M	17	**F**	**22**	M	13}	FM	16	FM	14	FM	16	FM	07	FM	16
4	c	08}	FC	07}	c	13}	FC	09	c	10	FC	10	FC	05	FC	09
5	CF	08}	CF	07}	FC	13}	c	07	FC	05	c	08	c	02	c	07
6	FC	01	c	06	CF	04	CF	06	CF	03	CF	05	CF	01	CF	03
	FM:M*						M:FM*									
Content																
Rank																
1	**A**	**51**	A	38*	**A**	**49**	A	41*	**A**	**50**	**A**	**45**	**A**	**43**	**A**	**51**
2	Ad	10	H	23	H	14	H	25	H	19	H	21	H	21	H	22
3	H	08	Ad	14	Ad	10	Ad	11	Ad	12	Ad	10	Ad	13	Ad	07
4	Hd	05	Hd	03	Hd	05	Hd	02	Hd	03	Hd	05	Hd	03	Hd	05

Bold Type indicates significant difference between adjacent ranks
* Non-significant difference between adjacent ranks
[1]The absence of **Bold Type** or * indicates that adjacent rank differences were not tested.

with F in first place (significantly so in three of four groups) and M in second place and FM in third for all groups. For the 18-year-old group, M is significantly higher than FM for both boys and girls. Color is not a frequently used main determinant, but since only a part of the card is colored, this is not surprising in view of the strong W pull characteristic of the card.

A is the most frequently used content category, significantly so in six of the eight groups, with H fairly consistently in second place.

Our subjects show a tendency to use Card II as W, with F or FM at the earlier ages and F or M after age 13.

CARD III

W again consistently occupies first rank at all ages and for both sexes except the 18-year-old girls where the first and second ranks are reversed. These differences are significant except at age 15. D ranks in second place and is significantly higher than third rank in all cases.

M is first in rank in the determinant category (significantly so

in half the groups) until the increasing trend toward F with age, which is discussed in the normative article (8), becomes apparent at age 18 where F supersedes M. This difference is not significant for either boys or girls. F is second to M in rank for the first three

TABLE III—Per Cent of Each Variable Based on Total Responses to *Card III*[1]

Locations	11 Years				13 Years				15 Years				18 Years			
	Boys		Girls		Boys		Girls		Boys		Girls		Boys		Girls	
Rank		%		%		%		%		%		%		%		%
1	**W**	**60**	**W**	**58**	**W**	**59**	**W**	**61**	W	49*	W	49*	**W**	**53**	**D**	**52**
2	**D**	**30**	**D**	**38**	**D**	**36**	**D**	**39**	**D**	**44**	**D**	**42**	**D**	**35**	**W**	**39**
3	Dd	06	S	04	d	03	d	00)	Dd	04	Dd	04)	Dd	09	Dd	05
4	S	02	Dd	01	Dd	02	Dd	00)	d	03	d	04)	d	02	d	03
5	d	01	d	00	S	00	S	00)	S	00	S	01	S	01	S	01
Determinants																
Rank																
1	M	45*	**M**	**50**	**M**	**50**	**M**	**53**	M	46*	M	41	F	42	F	43*
2	F	31*	**F**	**26**	**F**	**31**	**F**	**29**	**F**	**37**	**F**	**40**	**M**	**40**	**M**	**37**
3	FM	18	FM	10	FC	10*	FC	09	FM	07	FC	09	FM	07	FM	06)
4	CF	02	FC	08	FM	06	c	03)	FC	05	FM	06	FC	05	FC	06)
5	c	01)	c	02)	c	01)	CF	03)	c	00)	c	02	CF	01	c	02
6	FC	01)	CF	02)	CF	01)	FM	01	CF	00)	CF	01	c	00	CF	01
	FM:CΣ															
Content																
Rank																
1	H	37*	H	42*	**H**	**47**	**H**	**50**	**H**	**48**	**H**	**42**	H	41*	H	38*
2	A	26	A	26	A	24	A	17	A	28	A	28	**A**	**38**	A	28
3	Hd	10	Hd	08	Hd	05	Ad	05	Ad	05	Ad	05)	Ad	05	Ad	04
4	Ad	06	Ad	01	Ad	04	Hd	01	Hd	02	Hd	05)	Hd	01	Hd	03

Bold Type indicates significant difference between adjacent ranks
* Non-significant difference between adjacent ranks
[1]The absence of **Bold Type** or * indicates that adjacent rank differences were not tested.

age levels, and rank 2 (whether F or M) is significantly higher than the pull of any other of the determinants.

The other determinants are not consistent in position, but FC and FM generally hold third or fourth ranks. The color-pull for this card, as in Card II, is not strong.

H is the most frequently used content category and is significantly different from A, the second in rank, at ages 13 and 15. Thus, the "standard" response on Card III appears to be the popular W, M, H.

CARD IV

W is first in rank consistently and significantly at all age levels for both sexes. D is the next most frequently used category for the boys and, interestingly enough, d for the girls until age 18 when they use more D. The differences between second and third rank are not significant although the trend is consistent.

F is consistently in first place in all groups and is significantly higher than the second in rank after age 13. Texture responses are consistently second in rank and significantly different from third in rank in five of the eight groups. The actual differences in the per cents of F and c are large enough after age 11 to assume that they are not exclusively a function of the high mean F in our

TABLE IV—Per Cent of Each Variable Based on Total Responses to *Card IV*[1]

Locations Rank	11 Years Boys	%	11 Years Girls	%	13 Years Boys	%	13 Years Girls	%	15 Years Boys	%	15 Years Girls	%	18 Years Boys	%	18 Years Girls	%
1	**W**	**59**	**W**	**64**	**W**	**61**	**W**	**63**	**W**	**51**	**W**	**43**	**W**	**57**	**W**	**40**
2	D	19	d	14*	**D**	**22**	d	16	D	24*	d	22	D	17}	D	24
3	Dd	16*	D	12}	d	08	D	12	d	13	Dd	18	Dd	17}	d	20
4	d	06	Dd	12}	Dd	07	Dd	07	Dd	10	D	16	d	09	Dd	14
5	S	00	S	00	S	00	S	02	S	01	S	01	S	00	S	03
Determinants Rank																
1	F	37*	F	32*	F	48*	**F**	**51**	**F**	**65**	**F**	**55**	**F**	**60**	**F**	**60**
2	c	32*	c	26*	**c**	**31**	**c**	**27**	**c**	**22**	**c**	**25**	**c**	**22**	c	18*
3	FM	16	FM	16	FM	13	M	09	M	06	FM	09	M	05}	M	10
4	M	05	M	12	M	05	FM	08	FM	05	M	06	FM	05}	FM	04
Content Rank																
1	A	35*	A	28*	**A**	**35**	A	36*	Ad	21*	A	26*	A	25*	Ad	23
2	Ad	19*	Ad	18	Ad	16	Ad	21	A	18*	Ad	20	Ad	16	**A**	**20**
3	Hd	09	H	15	H	08	H	14	H	10	Hd	17	H	05}	Hd	10
4	H	05	Hd	05	Hd	05	Hd	07	Hd	09	H	05	Hd	05}	H	09

Bold Type indicates significant difference between adjacent ranks
* Non-significant difference between adjacent ranks
[1]The absence of **Bold Type** or * indicates that adjacent rank differences were not tested.

group, but rather a real difference between form-pull and texture-pull on Card IV.

CARD V

Card V, even more than the preceding cards, has a strong W pull. The range in per cent of W response is from 55 to 83. d is in second place consistently for both sexes and all ages although it

TABLE V—Per Cent of Each Variable Based on Total Responses to *Card V*[1]

Locations Rank	11 Years Boys	%	11 Years Girls	%	13 Years Boys	%	13 Years Girls	%	15 Years Boys	%	15 Years Girls	%	18 Years Boys	%	18 Years Girls	%
1	**W**	**77**	**W**	**80**	**W**	**83**	**W**	**78**	**W**	**69**	**W**	**65**	**W**	**76**	**W**	**55**
2	d	12	d	12	d	10	d	09	d	17*	d	22	d	11	d	17
3	Dd	07	Dd	05	Dd	04	Dd	06	Dd	07}	Dd	07	Dd	09	Dd	15
4	S	02	D	02	S	02	D	05	D	07}	D	06	D	04	D	11
5	D	01	S	01	D	01	S	01	S	00	S	01	S	00	S	03
	d:D		**d:D**		**d:D**						**d:D**		d:D*		d:D*	
Determinants Rank																
1	FM	56*	**FM**	**62**	**F**	**67**	F	53*	**F**	**72**	**F**	**63**	**F**	**73**	**F**	**73**
2	**F**	**38**	F	27	FM	29	**FM**	**37**	FM	23	FM	25	FM	17	FM	17
3	M	02	c	05	c	01	M	04	M	01	M	05	M	03	M	04
4	c	00	M	02	M	00	c	03	c	00	c	03	c	00	c	02
Content Rank																
1	**A**	**74**	**A**	**77**	**A**	**81**	**A**	**80**	**A**	**72**	**A**	**64**	**A**	**75**	**A**	**55**
2	Ad	11	Ad	08	Ad	06	Ad	09	Hd	12	Ad	23	Hd	08}	Ad	17
3	Hd	05	Hd	04	Hd	04	H	05	Ad	11	Hd	06	Ad	08}	Hd	14
4	H	01	H	01	H	01	Hd	04	H	01	H	05	H	02	H	06

Bold Type indicates significant difference between adjacent ranks
* Non-significant difference between adjacent ranks
[1]The absence of **Bold Type** or * indicates that adjacent rank differences were not tested.

is not significantly different from the third rank, Dd. In half of the groups, d was used significantly more often than D.

Again F ranks the highest in determinants after age 11 and is significantly different from rank 2 in six of the eight groups. FM

decreases in relation to F both in rank and in absolute per cent from age 11 on. The remaining two determinants (M and c) never contribute more than 8% of the total responses to this card.

A is the most frequently used content category with no other category even approaching it in per cent. The "standard" response to Card V, in our group, is, therefore, not the popular W, FM, A but rather W, F, A.

CARD VI

W is again emphatically the preferred location category, being significantly above rank 2 in all groups. D is consistently in rank 2 although it is significantly higher than the remaining location categories in only two cases.

In Card VI, the tendency for the use of F to increase with age is again apparent. For ages 11 and 13, both boys and girls use texture significantly more often than F. There is a reversal of this pattern at age 15 which carries on through the 18-year records and holds true for both sexes. In two groups (15-year-old boys and 18-year-old girls), F becomes significantly higher than the texture responses.

TABLE VI—Per Cent of Each Variable Based on Total Responses to *Card VI*[1]

	11 Years				13 Years				15 Years				18 Years			
	Boys		Girls		Boys		Girls		Boys		Girls		Boys		Girls	
Locations Rank		%		%		%		%		%		%		%		%
1	**W**	**70**	**W**	**70**	**W**	**67**	**W**	**69**	**W**	**56**	**W**	**54**	**W**	**64**	**W**	**48**
2	D	16*	D	22	D	18*	D	16	D	17	D	21*	D	20	D	26
3	d	07}	Dd	05	Dd	08	d	09	d	15	Dd	16	Dd	08	Dd	14
4	Dd	07}	d	03	d	06	Dd	05	Dd	09	d	08	d	07	d	12
5	S	00	S	01	S	00	S	00	S	03	S	00	S	00	S	01
Determinants Rank																
1	**c**	**54**	**c**	**54**	**c**	**60**	**c**	**65**	**F**	**56**	**F**	**49***	**F**	**49***	**F**	**54**
2	F	21*	F	27	F	36	F	28	c	31	c	46	c	35	c	35
3	FM	16	FM	09	FM	00}	FM	03}	FM	03}	FM	02	FM	04	FM	03}
4	M	04	M	04	M	00}	M	03}	M	03}	M	00	M	03	M	03}
Content Rank																
1	**A**	**26**	**A**	**24**	Ad	14	A	14	A	19*	Ad	19*	A	17*	A	17*
2	Ad	07	Ad	07	A	13	Ad	10	Ad	12	A	09	Ad	14	Ad	15
3	Hd	05	Hd	05	H	03	Hd	04	Hd	07	Hd	05	Hd	04	Hd	04
4	H	04	H	01	Hd	01	H	03	H	01	H	00	H	01	H	01

Bold Type indicates significant difference between adjacent ranks
* Non-significant difference between adjacent ranks
[1]The absence of **Bold Type** or * indicates that adjacent rank differences were not tested.

It is clear, however, that F and texture together are used significantly more often than the other categories, constituting 75 to 96 per cent of the responses. The differences between second and third ranks are significant in seven of the groups.

A is the largest content category of those discussed here. However, it should be pointed out that Aobj may be the most frequently used content but was not included in the overall study since it is used so rarely in other cards.

Card VII

With Card VII, the tendency of the previous cards to pull a majority of W responses begins to break down. Although W still represents the largest percentage of the responses (except at age 11), the differences between W and D are smaller, and fewer of them are statistically reliable.

Table VII—Per Cent of Each Variable Based on Total Responses to *Card VII*[1]

	11 Years				13 Years				15 Years				18 Years			
	Boys		Girls		Boys		Girls		Boys		Girls		Boys		Girls	
Locations Rank		%		%		%		%		%		%		%		%
1	D	46*	D	48*	W	45*	**W**	**63**	W	51*	**W**	**53**	**W**	**55**	W	43*
2	**W**	**39**	**W**	**39**	**D**	**38**	**D**	**28**	**D**	**35**	**D**	**33**	D	28	**D**	**38**
3	d	07	S	10*	d	07	S	05	Dd	08	d	05	Dd	12	Dd	11
4	Dd	04	d	03	S	07	Dd	03	d	03	Dd	04	d	04	d	05
5	S	04	Dd	01	Dd	03	d	01	S	02	S	04	S	01	S	03
							S:d*		Dd:S*				Dd:S*		**Dd:S**	
Determinants Rank																
1	F	33*	F	34*	F	48*	M	43*	F	48*	F	45*	M	42	M	44
2	M	26*	M	30*	**M**	**36**	**F**	**35**	**M**	**40**	**M**	**34**	**F**	**40**	**F**	**44**
3	**FM**	**25**	FM	20*	FM	07	FM	13*	FM	06*	FM	07	FM	05*	FM	03
4	c	06	c	08	c	01	c	05	c	02	c	07	c	01	c	03
Content Rank																
1	A	28*	A	22	H	30*	**H**	**43**	H	38*	H	34*	**H**	**48**	**H**	**43**
2	H	18	Hd	20	A	24	A	23	A	23	A	27	A	15	A	19
3	Ad	18	H	19	Hd	17	Hd	14	Hd	13	Hd	15	Ad	13	Hd	12
4	Hd	11	Ad	14	Ad	07	Ad	05	Ad	08	Ad	04	Hd	06	Ad	10
			A:Ad*													

Bold Type indicates significant difference between adjacent ranks
* Non-significant difference between adjacent ranks
[1]The absence of **Bold Type** or * indicates that adjacent rank differences were not tested.

Pure form and human movement are the major determinants given to Card VII at all ages, with only small and non-significant differences between the per cent of total responses represented by each. Animal movement consistently holds the third rank, with texture responses occurring less frequently than any other determinant. Although the differences between FM and texture are not large, the comparisons of texture with M and F *do* give significant critical ratios and indicate that, while Card VII is considered a strongly shaded card, its surface texture-pull for our group is negligible.

After age 11, H is consistently in first rank for content, significantly so in three of the six comparisons.

Card VIII

The first two ranks of the location variables change completely with Card VIII. The per cent D is larger than the per cent W at all ages and for both sexes. However, W pull is still a second rank characteristic of this card since, in seven of the eight comparisons, it is significantly larger than the next location score. Dd is the third rank at all ages, but the differences between it and the other two variables are very small.

TABLE VIII—Per Cent of Each Variable Based on Total Responses to *Card VIII*[1]

Locations Rank	11 Years				13 Years				15 Years				18 Years			
	Boys	%	Girls	%	Boys	%	Girls	%	Boys	%	Girls	%	Boys	%	Girls	%
1	**D**	**79**	**D**	**75**	**D**	**62**	**D**	**56***	**D**	**73**	**D**	**58**	**D**	**57**	**D**	**61**
2	W	13*	**W**	**20**	**W**	**30**	**W**	**39**	**W**	**22**	**W**	**26**	**W**	**30**	**W**	**24**
3	Dd	06	Dd	03	Dd	07	Dd	03	Dd	04	Dd	10	Dd	12	Dd	12
4	d	01	S	03	d	00	d	01	d	01	d	04	S	01	S	03
5	S	00	d	01	S	00	S	01	S	00	S	03	d	00	d	01
Determinants Rank																
1	**FM**	**46**	**FM**	**46**	FM	44*	FM	40*	F	44*	F	40	F	44*	FM	37
2	F	20	FC	19*	**F**	**35**	**F**	**31**	**FM**	**39**	**FM**	**39**	**FM**	**37**	**F**	**36**
3	FC	18*	F	15	FC	08	FC	13	FC	09	FC	10	FC	07	FC	12
4	CF	07	CF	10	CF	08	CF	08	CF	02	CF	06	CF	05	CF	09
5	M	03	c	03	c	03	c	01	c	01	c	02	c	02	M	02
6	c	01	M	02	M	00	M	00	M	01	M	01	M	00	c	00
	CΣ : F*		**CΣ : F***		**F : CΣ**		**F:CΣ***		**F : CΣ**		**F : CΣ**		**F : CΣ**		**F : CΣ**	
Content Rank																
1	**A**	**61**	**A**	**56**	**A**	**66**	**A**	**63**	**A**	**67**	**A**	**61**	**A**	**62**	**A**	**60**
2	Ad	07	Ad	05	Ad	06	Ad	04	Ad	09	Ad	11	Ad	04	Ad	02
3	Hd	03	Hd	04	Hd	02	Hd	04	H	01	Hd	04	Hd	02	H	02
4	H	01	H	00	H	00	H	00	Hd	00	H	00	H	00	Hd	01

Bold Type indicates significant difference between adjacent ranks
* Non-significant difference between adjacent ranks
[1]The absence of **Bold Type** or * indicates that adjacent rank differences were not tested.

FM and F are the determinants pulled most frequently in Card VIII. Only at age 11 is there a significant difference between them, with FM the larger at that age. The increase of the F per cent from ages 11 to 18 is again apparent in its change from second to first rank with increasing age. In Card VIII, the comparisons of color-pull (FC+CF) to F pull show F to be significantly greater at ages 15 and 18. Only at age 11 is the color-pull greater than the F and then not significantly so. However, FC and CF do consistently rank above M and texture for this card.

A is the predominant content in Card VIII, with A per cent much larger than the others at all ages. The "standard" response to this card in our group would seem to be D, F or FM, A, with a few of the subjects combining the response into a W.

CARD IX

Card IX continues the significant D pull trend established in Card VIII. W is second in rank in all groups except 11-year-old boys but is significantly different from rank 3 in only one group. The last two ranks (d and S) combined never account for more than 9% of the total responses to the card.

F is the most frequently used determinant to Card IX and is significantly higher than rank 2 in all but one group. The FC and CF scores were again combined into total color-pull score to test against F. F proved significantly higher after age 11 than even the total color-pull. Over the ages F goes up and color goes down. One other surprising facet of the data is that the texture scores are so conspicuously and consistently low. Since Card IX has almost as

TABLE IX—Per Cent of Each Variable Based on Total Responses to *Card IX*[1]

	11 Years				13 Years				15 Years				18 Years			
	Boys		Girls		Boys		Girls		Boys		Girls		Boys		Girls	
Locations Rank		%		%		%		%		%		%		%		%
1	**D**	**51**	**D**	**59**	**D**	**62**	**D**	**57**	**D**	**65**	**D**	**55**	**D**	**58**	**D**	**58**
2	Dd	23*	W	22*	W	25*	**W**	**29**	W	17	W	22	W	22*	Dd	20
3	W	20	Dd	13	Dd	11	Dd	09	Dd	13	Dd	15	Dd	13	W	17
4	S	03	S	06	d	01	d	04	d	04	d	06	d	04	S	03
5	d	03	d	00	S	00	S	01	S	01	S	03	S	02	d	02
Determinants Rank																
1	**F**	**36**	F	32*	**F**	**52**	**F**	**55**	**F**	**62**	**F**	**61**	**F**	**52**	**F**	**53**
2	FM	16	CF	18	CF	16*	CF	13	FC	08	M	13	M	13	M	16
3	FC	14	FC	17	FC	10	M	12	M	07	FC	08	CF	12	CF	11
4	M	12	M	11	FM	10	FC	09	CF	07	CF	08	FM	04	FC	07
5	CF	09	FM	10	M	06	FM	02	FM	05	FM	04	FC	02	FM	03
6	c	01	c	05	c	01	c	02	c	01	c	01	c	01	c	01
	F : CΣ*		CΣ : F*		**F : CΣ**		**F : CΣ**		**F : CΣ**		**F : CΣ**		**F : CΣ**		**F : CΣ**	
	CΣ: FM*		**CΣ: FM**		**CΣ: FM**		CΣ : M*		CΣ : M*		**CΣ: FM**				**CΣ: FM**	
	CF : c*		FM : c*		M : c*		FC: FM*		FM : c*		FM : c*		**M : FC**			
			CF : M*													
	CΣ : c		**CΣ : c**		**CΣ : c**		**CΣ : c**		**CΣ : c**		**CΣ : c**		**CΣ : c**		**CΣ : c**	
Content Rank																
1	A	28*	A	20*	A	30*	A	19	A	26	Hd	22	A	16	H	20*
2	Ad	19	Hd	11	Ad	20	Hd	18	Ad	24	A	21	H	15	Hd	17
3	Hd	13	H	11	Hd	11	H	18	Hd	12	H	18	Hd	14	A	14
4	H	12	Ad	09	H	09	Ad	13	H	07	Ad	08	Ad	13	Ad	13
							A:Ad*		A : Hd*							

Bold Type indicates significant difference between adjacent ranks
* Non-significant difference between adjacent ranks
[1]The absence of **Bold Type** or * indicates that adjacent rank differences were not tested.

pronounced texture as it has color, one might expect more texture responses to the card. Color, however, has the stronger pull. This might in part be an artifact produced by the convention of giving color scoring priority, but this would probably not account entirely for the difference.

There is no outstanding content category given to this card. The use of content seems more evenly spread over the four major categories than in the other cards.

CARD X

More than 82% of the responses to Card X fall into the D location category. This is not surprising when one considers the "separateness" of the blot areas on the card. W is second in rank for all ages and both sexes, and significantly higher than the next rank for the 11, 13, and 15-year-old boys.

Even in this highly colored card, F is rank 1 in the determinants, followed by FM. FC comes in a poor third in most of the groups with F or FM significantly higher than FC in all groups. In regard to intra-color relationships, an age trend may be observed. At ages 11 and 13, FC and CF are adjacent in rank with non-significant differences, although FC is always the higher. From age 15 on, FC is significantly higher than CF except for 18-year-old boys.

TABLE X—Per Cent of Each Variable Based on Total Responses to *Card X*[1]

Locations Rank	11 Years Boys %	11 Years Girls %	13 Years Boys %	13 Years Girls %	15 Years Boys %	15 Years Girls %	18 Years Boys %	18 Years Girls %
1	**D 83**	**D 82**	**D 85**	**D 83**	**D 85**	**D 85**	**D 85**	**D 90**
2	**W 12**	W 10*	**W 14**	W 10*	**W 13**	W 09*	W 09*	W 05
3	Dd 03	Dd 04	Dd 03	Dd 04	Dd 03	Dd 04	Dd 04	Dd 04
4	S 01	S 01	S 01	S 01	S 01	S 01	S 02	S 01
Determinants Rank								
1	**FM 41**	F 36*	**F 49**	**F 48**	**F 52**	**F 58**	**F 65**	**F 61**
2	**F 22**	**FM 30**	**FM 27**	**FM 23**	FM 20*	FM 18*	FM 12	FC 17*
3	M 11	FC 12	FC 10	FC 12	FC 14	**FC 13**	FC 10*	FM 11
4	FC 10	CF 09	CF 06	CF 06	M 05	CF 04	CF 05	M 07
5	CF 06	M 06	M 05	M 04	CF 04	M 02	M 04	CF 02
6	c 02	c 03	c 01	c 03	c 02	c 02	c 01	c 01
	F : CΣ*	FM: CΣ*	**FM:CΣ**	FM:CΣ*	**FC : CF**			**FC : CF**
								CΣ:FM
Content Rank								
1	**A 61**	**A 52**	**A 70**	**A 66**	**A 65**	**A 66**	**A 65**	**A 66**
2	H 08	Ad 11	Ad 08	Ad 10	Ad 10	Ad 09	Ad 09	Ad 09
3	Ad 06	Hd 05	H 04	Hd 04	H 06	Hd 04	H 04	H 05
4	Hd 05	H 03	Hd 03	H 03	Hd 01	H 02	Hd 00	Hd 03

Bold Type indicates significant difference between adjacent ranks
* Non-significant difference between adjacent ranks
[1]The absence of **Bold Type** or * indicates that adjacent rank differences were not tested.

A is by far the most popular content category. The "standard" response to Card X would be D, F or FM, A.

B. *Card Rank by Variable*

The following tables indicate the rank of each card on the separate variables for all ages for boys and girls. Critical ratios were computed by the same method as in the previous section. In addition, critical ratios were routinely computed between ranks 3 and 8 of most of the variables to see if the difference between the three top- and the three bottom-ranking cards was significant. This is recorded at the end of the columns in each table.

1. Locations

W

TABLE XI—Per Cent of *W* to Each Card Based on Total Responses Per Card[1]

Ranks	11 Years Boys %	11 Years Girls %	13 Years Boys %	13 Years Girls %	15 Years Boys %	15 Years Girls %	18 Years Boys %	18 Years Girls %
1	V 77	V 80	V 83*	V 78	V 69	V 65*	V 76	V 55
2	I 72	II 70 }	I 69	I 75	I 63	VI 54	VI 64	VI 48
3	VI 70	VI 70 }	VI 67	VI 69	VI 56	VII 53	I 59	II 46
4	III 60	I 68	II 62	VII 63 }	II 55	I 51	IV 57 }	VII 43
5	IV 59	IV 64	IV 61	IV 63 }	IV 51 }	II 50	II 57 }	IV 40
6	II 53*	III 58*	III 59*	III 61 }	VII 51 }	III 49	VII 55	III 39
7	VII 39*	VII 39*	VII 45*	**II 61** }	**III 49**	**IV 43**	**III 53**	**I 37**
8	IX 20	IX 22	VIII 30	VIII 39	VIII 22	VIII 26	VIII 30	VIII 24
9	VIII 13	VIII 20	IX 25	IX 29	IX 17	IX 22	IX 22	IX 17
10	X 12	X 10	X 14	X 10	X 13	X 09	X 09	X 05
Ranks	**3-8**	**3-8**	**3-8**	**3-8**	**3-8**	**3-8**	**3-8**	**3-8**

Bold Type indicates significant difference between adjacent ranks
* Non-significant difference between adjacent ranks
[1]The absence of **Bold Type** or * indicates that adjacent rank differences were not tested.

The differences between adjacent ranks for W pull are, for the most part, not significant. A significant difference between ranks 7 and 8 is apparent for 13-year-old girls and for both sexes at ages 15 and 18. This would indicate that Cards VIII, IX, and X are significantly lower in W pull than the remaining seven.

Card V consistently pulls the highest number of W, followed by Cards I and VI in ranks 2 and 3. The difference between the top three and bottom three cards in rank is significant in every case.

D

TABLE XII—Per Cent of *D* to Each Card Based on Total Responses Per Card[1]

	11 Years		13 Years		15 Years		18 Years	
Ranks	Boys %	Girls %	Boys %	Girls %	Boys %	Girls %	Boys %	Girls %
1	X 83	X 86	**X 82**	**X 85**	X 83	**X 85**	**X 85**	**X 90**
2	**VIII 79**	**VIII 75**	VIII 62 }	IX 57	VIII 73	VIII 58	IX 58	VIII 61
3	IX 51	IX 59	**IX 62** }	VIII 56*	**IX 65**	IX 55*	**VIII 57**	IX 58
4	VII 46*	VII 48	VII 38	III 39	III 44	III 42	III 35	**III 52**
5	III 30	III 38*	III 36	VII 28	VII 35	VII 33	VII 28	VII 38
6	II 21	VI 22	II 27	II 27	II 29	II 32	II 21	II 36
7	IV 19	I 19	IV 22	VI 16	IV 24	VI 21	I 20 }	I 26 }
8	VI 16	II 14	VI 18	I 13	VI 17	I 20	VI 20 }	VI 26 }
9	I 07	IV 12	**I 17**	IV 12	I 12	IV 16	**IV 17**	**IV 24**
10	V 01	V 02	V 01	V 05	V 07	V 06	V 04	V 11
Ranks	**3-8**	**3-8**	**3-8**	**3-8**	**3-8**	**3-8**	**3-8**	**3-8**

Bold Type indicates significant difference between adjacent ranks
* Non-significant difference between adjacent ranks
[1]The absence of **Bold Type** or * indicates that adjacent rank differences were not tested.

As would be expected, Card X, which ranks lowest on W, has the highest D pull, and the converse is also true. By virtue of its inherent "separateness," the per cent D of Card X is consistently well over 80, and its rank of 1 is significantly different from rank 2 (generally Card VIII) in five of the six groups after age 11.

The three top-ranking cards for D (X, VIII, and IX) are consistent in all groups and are significantly different from the lowest three ranks which are generally Cards V, I, and VI.

d

TABLE XIII—Per cent of *d* to Each Card Based on Total Responses Per Card[1]

	11 Years		13 Years		15 Years		18 Years	
Ranks	Boys %	Girls %	Boys %	Girls %	Boys %	Girls %	Boys %	Girls %
1	V 12*	IV 14	V 10	IV 16	V 17	IV 22 }	V 11	IV 20
2	VI 07 }	V 12	IV 08	V 09 }	VI 15	V 22* }	IV 09	V 17
3	VII 07 }	I 06 }	VII 07	VI 09 }	IV 13	I 09	II 08	I 14
4	IV 06	II 06 }	VI 06	I 04 }	II 09	VI 08	I 07 }	VI 12
5	II 05	VI 03 }	I 04	IX 04 }	IX 04	II 07	VI 07 }	II 05 }
6	I 04	VII 03 }	III 03	II 01 }	I 03 }	IX 06	VII 04 }	VII 05 }
7	IX 03	VIII 01	II 02	VII 01 }	III 03 }	VII 05	IX 04 }	III 03
8	III 01 }	III 00 }	IX 01	VIII 01 }	VII 03 }	III 04 }	III 02	IX 02
9	VIII 01 }	IX 00 }	VIII 00 }	III 00 }	VIII 01	VIII 04 }	VIII 00 }	VIII 01
10	X 00	X 00 }	X 00 }	X 00 }	X 00	X 00	X 00 }	X 00
	V:VIII	**IV:VIII**	**V:IX**	**IV:II**	**V:VIII**	**IV:III**	**V:III**	**IV:VIII**

Bold Type indicates significant difference between adjacent ranks
* Non-significant difference between adjacent ranks
[1]The absence of **Bold Type** or * indicates that adjacent rank differences were not tested.

Our sample gave so few d to the entire test that the per cent for any card is very small. There are no significant differences between adjacent ranks.

In the case of d, because the percentages were so small, instead of computing the critical ratio between ranks 3 and 8 to establish significances between the top and bottom three ranks, the critical ratio was computed between rank 1 and the lowest card on which any d were given. The differences between rank 1, consistently Card V for the boys and Card IV for the girls, and the lowest per cent were significant in every case.

If Card X is eliminated from consideration (since there are no d possible on Card X), Card VIII then ranks lowest in six of the eight groups.

Dd

TABLE XIV—Per Cent of *Dd* to Each Card Based on Total Responses Per Card[1]

	11 Years		13 Years		15 Years		18 Years	
Ranks	Boys %	Girls %	Boys %	Girls %	Boys %	Girls %.	Boys %	Girls %
1	IX 23*	IX 13	IX 11	IX 09	I 22*	I 20	IV 17	IX 20
2	I 16	IV 12	I 08	I 08	IX 13	IV 18	I 13	I 19
3	IV 16*	I 08	VI 08	IV 07	IV 10	VI 16	IX 13	V 15
4	II 09	V 05	IV 07	V 06	VI 09	IX 15	VII 12	IV 14
5	V 07	VI 05	VIII 07	VI 05	VII 08	VIII 10	VIII 12	VI 14
6	VI 07	X 04	II 04	II 04	V 07	V 07	II 09	VIII 12
7	III 06	VIII 03	V 04	X 04	III 04	II 05	III 09	VII 11
8	VIII 06	II 01	VII 03	VII 03	VIII 04	III 04	V 09	II 05
9	VII 04	III 01	X 03	VIII 03	X 03	VII 04	VI 08	III 05
10	X 03	VII 01	III 02	III 00	II 02	X 04	X 04	X 04
	IX:X	**IX:II**	IX:III*	IX:VII*	**I:II**	**I:III**	**IV:X**	**IX:X**

Bold Type indicates significant difference between adjacent ranks
* Non-significant difference between adjacent ranks
[1]The absence of **Bold Type** or * indicates that adjacent rank differences were not tested.

Because of the infrequency with which our subjects used rare details, this variable was treated in the same way as d. Cards IX, I, and IV are usually the highest ranking cards, and Cards X and III most frequently among the bottom ranks. The differences between the cards in rank 1 and those in the lowest rank are significant at every age except 13.

S

Cards II and VII are the only cards of the series (with the exception of IX in 11-year-old girls) which have more than 4% white space responses. In no case does S represent more than 10% of the responses to any card. Since the proportions are so small, there are no significant differences between adjacent ranks. To test the effective S pull of Cards II and VII, therefore, the S's to these cards were combined and per cent S to II and VII obtained and compared to per cent S for the other eight cards combined. The S pull to II and VII is significantly greater than the other cards except at age 18 and for 15-year-old boys.

TABLE XV—Per Cent of *S* to Each Card Based on Total Responses Per Card[1]

Ranks	11 Years Boys %	11 Years Girls %	13 Years Boys %	13 Years Girls %	15 Years Boys %	15 Years Girls %	18 Years Boys %	18 Years Girls %
1	II 09*	VII 10	VII 07	II 07	II 05	II 05	II 06	II 07
2	VII 04	II 09	II 05	VII 05	VI 03	VII 04	IX 02	I 03
3	IX 03	IX 06	V 02	IV 02	VII 02	VIII 03	X 02	IV 03
4	III 02	III 04	I 01	V 01	IV 01	IX 03	III 01	V 03
5	V 02	VIII 03	X 01	VIII 01	IX 01	III 01	VII 01	VII 03
6	I 01	V 01	III 00	IX 01	X 01	IV 01	VIII 01	VIII 03
7	X 01	VI 01	IV 00	X 01	I 00	V 01	I 00	IX 03
8	IV 00	X 01	VI 00	I 00	III 00	X 01	IV 00	III 01
9	VI 00	I 00	VIII 00	III 00	V 00	I 00	V 00	VI 01
10	VIII 00	IV 00	IX 00	VI 00	VIII 00	VI 00	VI 00	X 01
	II:I*	VII:V	VII:I*	II:V*	II:IV*	II:III*	II:III*	II:III
	II+VII: Others	II+VII: Others	II+VII: Others	II+VII: Others	II+VII:* Others	II+VII: Others	II+VII:* Others	II+VII:* Others

Bold Type indicates significant difference between adjacent ranks
* Non-significant difference between adjacent ranks
[1]The absence of **Bold Type** or * indicates that adjacent rank differences were not tested.

2. Determinants

M

TABLE XVI—Per Cent of *M* to Each Card Based on Total Responses Per Card[1]

Ranks	11 Years Boys %	11 Years Girls %	13 Years Boys %	13 Years Girls %	15 Years Boys %	15 Years Girls %	18 Years Boys %	18 Years Girls %
1	**III 45**	**III 50**	III 50*	III 53*	III 46*	III 41*	VII 42	VII 44*
2	VII 26*	VII 30	**VII 36**	VII 43*	**VII 40**	VII 34*	**III 40**	**III 37**
3	II 17	II 26	II 13	II 31*	II 22*	II 24	II 22*	II 24*
4	I 14	I 19	I 11	I 21	I 12	I 18	I 14	I 16
5	IX 12	IV 12	IX 06	IX 12	IX 07	IX 13	IX 13	IX 16
6	X 11	IX 11	X 05	IV 09	IV 06	IV 06	IV 05	IV 10
7	IV 05	X 06	IV 05	X 04	X 05	V 05	X 04	X 07
8	VI 04	VI 04	VI 00	V 04	VI 03	X 02	VI 03	V 04
9	VIII 03	VIII 02	VIII 00	VI 03	VIII 01	VIII 01	V 03	VI 03
10	V 02	V 02	V 00	VIII 00	V 01	VI 00	VIII 00	VIII 02
Ranks	**3-8**	**3-8**	3-8*	**3-8**	**3-8**	**3-8**	**3-8**	**3-8**

Bold Type indicates significant difference between adjacent ranks
* Non-significant difference between adjacent ranks
[1]The absence of **Bold Type** or * indicates that adjacent rank differences were not tested.

Card III holds the first rank for M production, and Card VII the second for ages 11, 13, and 15, although only at age 11 is there a significant difference between them. At age 18, the popular M to Card III takes second place to the M on Card VII. Since M was also high among the determinants for Card VII (see discussion of variable rank by card), these data indicate that M pull is an important aspect of Card VII for our group, almost equal to the M pull of Card III.

Cards III, VII, and II are the strongest cards, and Cards V, VIII, and VI the weakest in M, with the differences between the third and eighth ranks significant in seven of the eight groups.

FM

Cards VIII and V are the FM cards in the series, with VIII holding the first rank after age 11. However, until age 18, the difference between them is not significant. Card X ranks third, and

TABLE XVII—Per Cent of *FM* to Each Card Based on Total Responses Per Card[1]

	11 Years		13 Years		15 Years		18 Years	
Ranks	Boys %	Girls %	Boys %	Girls %	Boys %	Girls %	Boys %	Girls %
1	V 56*	V 62*	VIII 44*	VIII 40	VIII 39*	VIII 39*	**VIII 37**	**VIII 37**
2	VIII 46	**VIII 46**	V 29	V 37*	V 23	V 25	V 17	V 17
3	X 41*	X 30	X 27	X 23	X 20	X 18	X 12	II 16
4	II 29	II 23	II 19	II 16	II 14	II 16	II 07 }	X 11
5	I 25 }	VII 20	IV 13	VII 13	I 10	IV 09	III 07 }	I 06 }
6	VII 25 }	I 19	IX 10	I 08 }	III 07	I 08	VII 05 }	III 06 }
7	III 18	IV 16	I 09	IV 08 }	VII 06	VII 07	I 05 }	IV 04
8	IV 16 }	III 10 }	VII 07	VI 03	IV 05 }	III 06	IV 05 }	VII 03 }
9	IX 16 }	IX 10 }	III 06	IX 02	IX 05 }	IX 04	IX 04 }	IX 03 }
10	VI 16 }	VI 09	VI 00	III 01	VI 03	VI 02	VI 04 }	VI 03 }
Ranks	**3-8**	**3-8**	**3-8**	**3-8**	**3-8**	**3-8**	**3-8**	**3-8**

Bold Type indicates significant difference between adjacent ranks
* Non-significant difference between adjacent ranks
[1]The absence of **Bold Type** or * indicates that adjacent rank differences were not tested.

the per cent of FM to these three cards is always significantly greater than that to the last three. Cards IX and VI are consistently in the bottom ranks. Card II, to which there is (in the Klopfer scoring system) a popular FM, ranks only fourth in all groups except the 18-year-old girls.

F

TABLE XVIII—Per Cent of *F* to Each Card Based on Total Responses Per Card[1]

	11 Years		13 Years		15 Years		18 Years	
Ranks	Boys %	Girls %	Boys %	Girls %	Boys %	Girls %	Boys %	Girls %
1	I 47*	I 44*	I 73	I 57	V 72	I 65	I 78	V 73
2	V 38	X 36	V 67*	IX 55	I 66	V 63	V 73	I 69
3	IV 37	VII 34	IX 52	V 53	IV 65	IX 61	X 65	X 61
4	IX 36	IV 32 }	X 49	IV 51	IX 62	X 58	IV 60	IV 60
5	VII 33	IX 32 }	VII 48 }	X 48*	VI 56	IV 55	IX 53 }	VI 54
6	III 31	V 27 }	IV 48 }	VII 35	X 52	VI 49	II 53 }	IX 52
7	II 27	VI 27 }	VI 36	VIII 31	VII 48	VII 45	VI 49	VII 44
8	X 22	III 26	VIII 35	III 29	VIII 44	VIII 40 }	VIII 44	III 43
9	VI 21	II 22	II 33	VI 28	II 39	III 40* }	III 42	II 38
10	VIII 20	VIII 15	III 31	II 25	III 37	II 34	VII 40	VIII 36
Ranks	**3-8***	**3-8***	**3-8***	**3-8**	**3-8**	**3-8**	**3-8**	**3-8**

Bold Type indicates significant difference between adjacent ranks
* Non-significant difference between adjacent ranks
[1]The absence of **Bold Type** or * indicates that adjacent rank differences were not tested.

Table XVIII shows no significant differences among adjacent ranks for F pull. This is undoubtedly due to the high mean F for every card in our group. The norms for our adolescent group (8) show a large and increasing mean F, and the F% per record ranges from an average of 30% for 11-year-old boys and girls to an average of 57% for 18-year-old boys. In view of this high F% per record, the high F% per card is to be expected. The tenth rank for F in our findings is as high as 40% (18-year-old boys). Since all of the F% are high, it is not surprising to find that no one card pulls significantly more F than the next in rank. At 15 and 18 years, however, there is a significant difference between the top and bottom three ranks, with Cards I and V most frequently in top ranks and

Cards VIII, III, and II generally pulling the smallest percentage of F.

Fc + cF

TABLE XIX—Per Cent of *Fc*+*cF* to Each Card Based on Total Responses Per Card[1]

	11 Years		13 Years		15 Years		18 Years	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
Ranks	%	%	%	%	%	%	%	%
1	**VI 54**	**VI 54**	**VI 60**	**VI 65**	VI 31*	**VI 46**	VI 35*	**VI 35**
2	**IV 32**	**IV 26**	**IV 31**	**IV 27**	IV 22*	**IV 25**	**IV 22**	**IV 18**
3	I 09	I 08	II 13	II 07	II 10	II 08	II 02	II 07
4	II 08	VII 08	I 06	I 06	I 03	VII 07	VIII 02	I 03
5	VII 06	II 06	VIII 03	VII 05	VII 02	I 05	I 01	VII 03
6	X 02	V 05	III 01	III 03	X 02	V 03	VII 01	III 02
7	III 01	IX 05	V 01	V 03	VIII 01	III 02	IX 01	V 02
8	VIII 01	VIII 03	VII 01	X 03	IX 01	VIII 02	X 01	IX 01
9	IX 01	X 03	IX 01	IX 02	III 00	X 02	III 00	X 01
10	V 00	III 02	X 01	VIII 01	V 00	IX 01	V 00	VIII 00
Ranks	3-8*	3-8*	**3-8**	3-8*	**3-8**	3-8*	3-8*	**3-8**

Bold Type indicates significant difference between adjacent ranks
* Non-significant difference between adjacent ranks
[1]The absence of **Bold Type** or * indicates that adjacent rank differences were not tested.

Cards VI and IV, of course, have the strongest texture-pull in the series. All of the groups except 15 and 18-year-old boys give significantly more shading responses to VI than to IV, and all but one group give significantly more to IV than to any of the remaining cards. On these other eight cards, Fc and cF contribute only 0 to 13% of the total responses. Card II is consistently in third rank after age 11, apparently with more texture-pull for our group than the shaded cards I and VII, although the per cents are so small that no significant rank differences can be demonstrated. For this same reason, the differences between the third and eighth ranks are significant in only three groups, although the differences between second and all other ranks are significant in seven groups.

Color

As the tables of card-pull for color indicate, only one of the adjacent rank differences for FC, CF, or total color-pull (FC+CF) is significant. However, a number of trends may be observed. There is a general decrease in the amount of color used as age increases. Consequently, only at the 11-year level, where there was the greatest use of color, were there many rank differences large enough to test. Card III pulls consistently fewer color responses than any other card through the age range.

In regard to CF, while there are no significant differences between the ranks, Card IX is always in first rank for CF pull and Card III in the last rank.

Because of the consistency with which Cards VIII, IX, and X were in the first three ranks at all age levels and Cards II and III in the last two, the per cent of the addition of all color responses to Cards VIII, IX, and X was obtained and compared to the same

TABLE XX—Per Cent of *FC*, *CF*, and *C*Σ to Each Card Based on Total Responses Per Card[1]

FC

	11 Years		13 Years		15 Years		18 Years	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
Ranks	%	%	%	%	%	%	%	%
1	VIII 18*	VIII 19	II 13	VIII 13	X 14	X 13	X 10	X 17
2	IX 14	IX 17	III 10	X 12	VIII 09	II 10	VIII 07	VIII 12
3	**X 10**	X 12	IX 10	II 09	IX 08	VIII 10	II 05	II 09
4	II 01	III 08	X 10	III 09	II 05	III 09	III 05	IX 07
5	III 01	II 07	VIII 08	IX 09	III 05	IX 08	IX 02	III 06

CF

1	IX 09	IX 18*	IX 16*	IX 13*	IX 07	IX 08	IX 12*	IX 11
2	II 08	VIII 10	VIII 08	VIII 08	X 04	VIII 06	VIII 05	VIII 09*
3	VIII 07	X 09	X 06	X 06	II 03	II 05	X 05	II 03
4	X 06	II 07	II 04	II 06	VIII 02	X 04	II 01	X 02
5	III 02	III 02	III 01	III 03	III 00	III 01	III 01	III 01

*C*Σ

1	VIII 25	IX 35*	IX 26*	IX 22	X 18	X 17	X 15	VIII 21
2	IX 23*	VIII 29*	II 17	VIII 21	IX 15	IX 16	IX 14	X 19
3	X 16*	X 21*	VIII 16	X 18	VIII 11	VIII 16	VIII 12	IX 18
4	II 09	II 14	X 16	II 15	II 08	II 15	II 06	II 12
5	III 03	III 10	III 11	III 12	III 05	III 10	III 06	III 07
Total	**VIII+IX +X II+III**	**VIII+IX +X II+III**	VIII+IX +X* II+III	VIII+IX +X* II+III	**VIII+IX** +X II+III	VIII+IX +X* II+III	**VIII+IX** +X II+III	**VIII+IX** +X II+III

Bold Type indicates significant difference between adjacent ranks
* Non-significant difference between adjacent ranks
[1]The absence of **Bold Type** or * indicates that adjacent rank differences were not tested.

datum for Cards II and III combined. There was a significant difference in pull in five of the eight groups.

In summary, no one card has outstanding color-pull although Cards VIII, IX, and X do pull more color responses than Cards II and III. This is hardly a startling finding since there is more color on VIII, IX, and X. However, it does have implications for the interpretive practice of considering the absence of color responses to II and III as a negative sign when we find a maximum of 17% FC+CF to either card.

3. Content

H

TABLE XXI—Per Cent of *H* to Each Card Based on Total Responses Per Card[1]

	11 Years		13 Years		15 Years		18 Years	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
Ranks	%	%	%	%	%	%	%	%
1	**III 37**	**III 42**	III 47*	III 50*	III 48*	III 42*	VII 48*	VII 43*
2	VII 18	II 23	**VII 30**	VII 43*	**VII 38**	VII 34*	**III 41**	**III 38**
3	I 15	VII 19	II 14	I 26	II 19	II 21	II 21	I 23
4	IX 12	I 17	I 13	II 25	IV 10	I 20	IX 15	II 22
5	II 08	IV 15	IX 09	IX 18	I 09	IX 18	I 14	IX 20
6	X 08	IX 11	IV 08	IV 14	IX 07	IV 05	IV 05	IV 09
7	IV 05	X 03	X 04	V 05	X 06	V 05	X 04	V 06
8	VI 04	V 01	VI 03	VI 03	V 01	X 02	V 02	X 05
9	V 01	VI 01	V 01	X 03	VI 01	VI 00	VI 01	VIII 02
10	VIII 01	VIII 00	VIII 00	VIII 00	VIII 01	VIII 00	VIII 00	VI 01
Ranks	3-8*	**3-8**	**3-8**	**3-8**	**3-8**	**3-8**	**3-8**	**3-8**

Bold Type indicates significant difference between adjacent ranks
* Non-significant difference between adjacent ranks
[1]The absence of **Bold Type** or * indicates that adjacent rank differences were not tested.

In line with the M pull of Cards III and VII is the fact that they also show the highest proportion of H. In fact, the age and sex patterns of H pull are identical with those of M, with III in rank 1 until age 18 where it is superseded by VII, and with Cards I and II generally in third and fourth ranks. The H pull of the first three ranks is significantly greater than that of the last three in seven of the eight groups.

A

TABLE XXII—Per Cent of *A* to Each Card Based on Total Responses Per Card[1]

	11 Years		13 Years		15 Years		18 Years	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
Ranks	%	%	%	%	%	%	%	%
1	V 74*	**V 77**	V 81*	**V 80**	V 72	X 66	V 75*	X 66
2	X 61	VIII 56	X 70	X 66	VIII 67	V 64	X 65	VIII 60
3	VIII 61	X 52	VIII 66*	**VIII 63**	X 65*	VIII 61*	**VIII 62**	V 55
4	II 51	II 38	II 49	II 41	II 50	II 45	II 43	**II 51**
5	I 40	I 36	I 36	IV 36	I 43	I 32	III 38	I 28
6	IV 35	IV 28	IV 35	I 31	III 28	III 28	I 36	III 28
7	VII 28	III 26	IX 30	VII 23	IX 26	VII 27	IV 25	IV 20
8	IX 28	VI 24	III 24	IX 19	VII 23	IV 26	VI 17	VII 19
9	III 26	VII 22	VII 24	III 17	VI 19	IX 21	IX 16	VI 17
10	VI 26	IX 20	VI 13	VI 14	IV 18	VI 09	VII 15	IX 14
Ranks	**3-8**	**3-8**	**3-8**	**3-8**	**3-8**	**3-8**	**3-8**	**3-8**

Bold Type indicates significant difference between adjacent ranks
* Non-significant difference between adjacent ranks
[1]The absence of **Bold Type** or * indicates that adjacent rank differences were not tested.

The card-rank pattern of A is similar to the FM pattern. Cards V, VIII, and X have the greatest A pull, and Cards VI and IX are most frequently in the bottom ranks. Card X, however, attains higher ranks for A pull than it did for FM, where it held third rank. The animal figure seen without animation seems to be a characteristic of X. In all groups the A pull of the top three cards (V, VIII, and X) is significantly greater than that of the cards ranking eighth or below.

Hd

TABLE XXIII—Per cent of *Hd* to Each Card Based on Total Responses Per Card[1]

	11 Years		13 Years		15 Years		18 Years	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
Ranks	%	%	%	%	%	%	%	%
1	IX 13	VII 20*	VII 17*	IX 18	VII 13	IX 22	IX 14	I 18
2	VII 11	IX 11	IX 11	VII 14	V 12	IV 17	I 08	IX 17
3	III 10	I 08	II 05	IV 07	IX 12	VII 15	V 08	V 14
4	IV 09	III 08	III 05	I 06	IV 09	I 12	VII 06	VII 12
5	I 06	IV 05	IV 05	V 04	VI 07	V 06	IV 05	IV 10
6	II 05	VI 05	I 04	VI 04	I 05	II 05	VI 04	II.05
7	V 05	X 05	V 04	VIII 04	II 03	III 05	II 03	VI 04
8	VI 05	VIII 04	X 03	X 04	III 02	VI 05	VIII 02	III 03
9	X 05	V 04	VIII 02	II 02	X 01	VIII 04	III 01	X 03
10	VIII 03	II 03	VI 01	III 01	VIII 00	X 04	X 00	VIII 01
Ranks	**3-8***	**3-8***	**3-8***	**3-8***	**3-8**	**3-8***	**3-8***	**3-8**

Bold Type indicates significant difference between adjacent ranks
* Non-significant difference between adjacent ranks
[1]The absence of **Bold Type** or * indicates that adjacent rank differences were not tested.

There are no significant differences among adjacent ranks, and in only two of the eight groups are the differences between third and eighth ranks significant for Hd. Cards VII and IX are most frequently in the first two ranks, but the differences are not statistically significant.

Ad

TABLE XXIV—Per Cent of *Ad* to Each Card Based on Total Responses Per Card[1]

	11 Years		13 Years		15 Years		18 Years	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
Ranks	%	%	%	%	%	%	%	%
1	I 21	I 22	I 25	IV 21*	IX 24	V 23	I 25*	IV 23*
2	IV 19	IV 18	IX 20	I 15	I 21	IV 20	IV 16	V 17
3	IX 19	II 14	IV 16	IX 13	IV 21*	VI 19	VI 14	I 15
4	VII 18	VII 14	VI 14	II 11	II 12	I 17	II 13	VI 15
5	V 11	X 11	II 10	X 10	VI 12	VIII 11	VII 13	IX 13
6	II 10	IX 09	X 08	VI 10	V 11	II 10	IX 13	VII 10
7	VI 07	V 08	VII 07	V 09	X 10	X 09	X 09	X 09
8	VIII 07	VI 07	V 06	III 05	VIII 09	IX 08	V 08	II 07
9	III 06	VIII 05	VIII 06	VII 05	VII 08	III 05	III 05	III 04
10	X 06	III 01	III 04	VIII 04	III 05	VII 04	VIII 04	VIII 02
Ranks	3-8*	3-8*	3-8*	3-8*	3-8*	3-8*	3-8*	3-8*

Bold Type indicates significant difference between adjacent ranks
* Non-significant difference between adjacent ranks
[1]The absence of **Bold Type** or * indicates that adjacent rank differences were not tested.

Among those tested, there are no significant card-pull differences for Ad. Cards I, IX, and IV are most frequently in the first two ranks, and Cards III and VIII in the last two.

Summary

"Card-pull" is defined in this article as the properties of the ink blot which seem to predispose the subject to the use of certain scoring variables.

We have presented tables of the per cent of the responses to each card contributed by each of 15 scoring variables. These tables were organized for two aspects of card-pull. In section A we have discussed the relative occurrence of the various location, determinant, and content categories on each of the ten cards. In section B we have discussed the rank of each of the cards for the degree to which they pull each of the variables.

Since, throughout the discussion of the results, we have been dealing with two sexes and four age groups, it seemed advantageous for summary purposes to combine the data from the eight groups and observe the card-pull trends which result. This manipulation places definite limitations on generalization from the data. The individuals in the four age groups overlap to some extent, and in a later paper[7] evidence of inter-age correlation on some variables and age changes on others will be presented. Consequently, the summary data presented in Table XXV and Figures 1, 2, and 3 do not represent uncomplicated mean card-pull per cents. For this reason,

[7]Another paper on age change and constancy of the Rorschach is in progress.

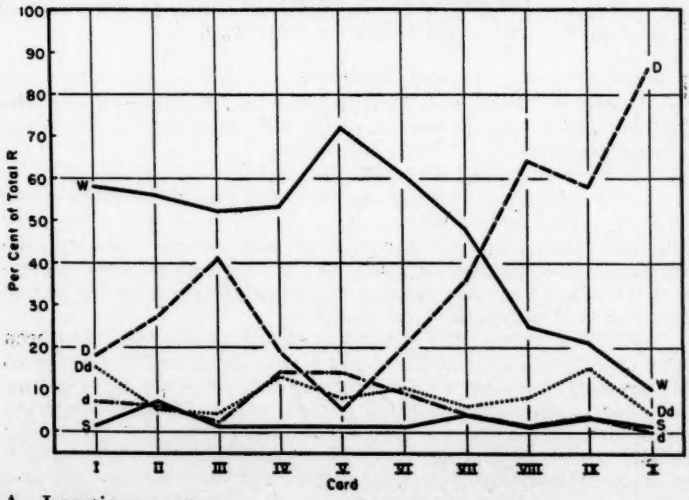
critical ratios were not calculated on these data. The summary data are divided into locations, determinants, and content.

TABLE XXV—Per Cent of Total Responses Represented by Each Scoring Variable
Age and Sex Groups Combined

Variable	CARD I	II	III	IV	V	VI	VII	VIII	IX	X
W	58	56	52	53	72	61	48	25	21	10
D	18	27	41	19	05	20	36	64	58	86
d	07	06	02	14	14	09	04	01	03	00
Dd	15	05	04	13	08	10	06	08	15	04
S	01	07	01	01	01	01	04	01	03	01
M	16	22	44	07	03	02	38	01	12	05
FM	10	17	07	09	31	04	10	41	06	20
F	65	36	36	53	60	42	41	34	51	51
Fc+cF	05	07	01	24	02	46	04	01	02	02
FC	----	08	07	----	----	----	----	12	09	13
CF	----	04	01	----	----	----	----	07	12	05
H	18	19	43	09	03	02	35	01	14	04
A	35	47	28	27	71	17	22	62	20	64
Hd	09	04	04	08	07	04	13	02	15	03
Ad	20	11	04	19	12	13	10	06	14	09
Number of Responses	831	810	923	803	739	704	756	903	832	1790

FIGURE 1

PER CENT OF TOTAL R REPRESENTED BY EACH LOCATION SCORING
ALL AGE AND SEX GROUPS COMBINED



A. Locations

W constitutes well over 50% of the responses to the first six cards of the series. This marked W pull begins to break down with Card VII, and, beginning with Card VIII, less than 25% of the

FIGURE 2

PER CENT OF TOTAL R REPRESENTED BY MAJOR DETERMINANT SCORINGS
ALL AGE AND SEX GROUPS COMBINED

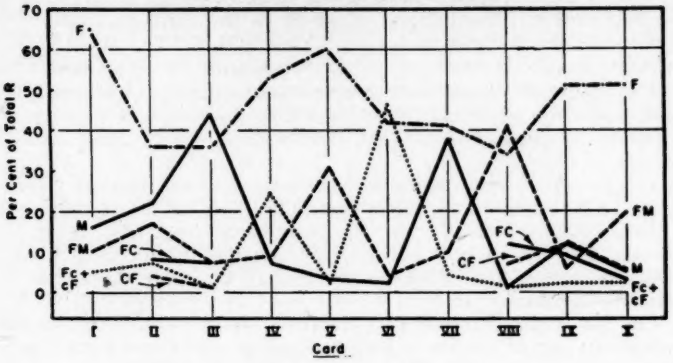
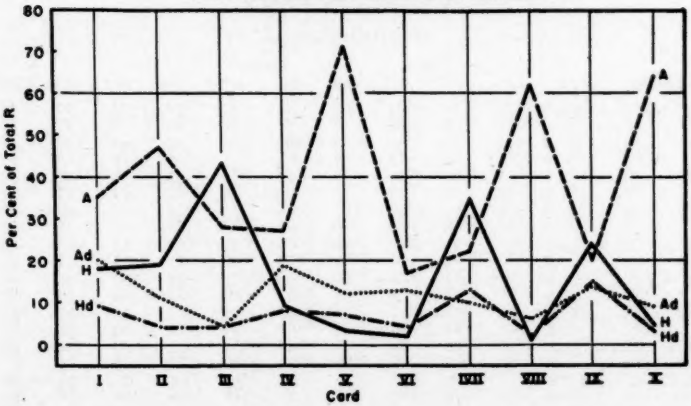


FIGURE 3

PER CENT OF TOTAL R REPRESENTED BY MAJOR CONTENT SCORINGS
ALL AGE AND SEX GROUPS COMBINED



responses to the rest of the series are W. D, on the other hand, shows the converse pattern, ranking second up to Card VIII, where it takes top position.

In Figure 1, the lines for d, Dd, and S, of course, cluster near the bottom. Dd ranges from 4% (Card III) to 15% (Cards I and IX) of the responses to a card; d from 1% (Card VIII) to 14% (Cards IV and V); and S from 1% (on most of the cards) to 7% (Card II).

B. Determinants

One of the most outstanding results is the high overall F pull. To five of the cards, over 50% of the responses were scored F. F is the first ranking determinant on seven of the cards and only 4% lower than the highest rank on another (Card VI). Since F is a variable largely ignored in the literature, we do not know how typical our results may be of an adolescent sample. However, they seem deserving of consideration in terms of the commonness of F responses to every card and the frequency of an F% *per card* of over 50.

On the other hand, color-pull is markedly weak for our group; FC and CF combined are never more than 21% of the responses to a card. Neither Card II nor III pulls more than 12% color responses. On this basis, it hardly seems justified either to label the failure to give a color response to Card II as "color shock," or to attribute significance to it.

Of the other determinants (texture, movement, and animal movement), each reaches a peak on certain cards and contributes relatively little to others. Texture is top on VI (46%), second on IV (24%), and never contributes more than 7% to any other

TABLE XXVI—Per Cent of Total Responses Represented by Each Scoring Variable

Series B—Age 12

		CARD									
Variable		I	II	III	IV	V	VI	VII	VIII	IX	X
W	b	73	54	52	57	74	51	36	22	27	12
	g	70	68	59	57	87	76	47	19	27	11
D	b	16	24	44	18	00	22	46	63	56	81
	g	22	22	33	18	03	11	44	78	55	81
d	b	10	08	00	18	18	16	05	01	02	00
	g	02	00	03	13	08	06	00	01	05	00
Dd	b	02	04	03	05	08	11	03	14	15	07
	g	07	02	03	10	02	07	03	01	10	02
S	b	00	08	02	00	00	00	08	00	00	00
	g	00	08	03	02	00	00	06	01	03	02
M	b	14	21	38	09	04	05	29	07	08	06
	g	15	27	46	05	03	00	35	00	13	05
FM	b	24	23	12	21	52	07	15	38	17	26
	g	22	32	09	17	69	07	21	50	11	31
F	b	35	27	30	29	44	33	32	29	34	33
	g	45	12	40	25	24	30	24	08	26	25
Fc+cF	b	16	00	03	29	00	42	08	01	00	05
	g	12	08	03	43	02	59	06	04	06	01
FC	b	....	04	02	....	....	....	....	10	10	14
	g	....	05	03	....	....	....	....	16	08	21
CF	b	....	15	09	....	....	....	....	10	20	08
	g	....	03	00	....	....	....	....	14	31	09
H	b	16	19	35	09	02	04	19	00	07	05
	g	10	22	41	05	05	00	22	02	10	01
A	b	25	31	27	38	72	25	22	56	20	58
	g	40	47	24	33	84	22	26	61	16	67
Hd	b	10	12	08	04	10	05	20	11	14	01
	g	13	02	06	08	00	02	23	00	03	04
Ad	b	35	06	08	21	16	16	12	08	22	18
	g	23	08	10	25	10	13	08	02	11	10

card. M is top on III (44%), second on VII (38%), 16% and 22% on I and II, respectively, and occurs rarely on the other cards. FM reaches its peaks on Cards VIII and V (first rank with 41% on VIII and second with 31% on V), with secondary peaks on X and II (20% and 17% respectively). See Figure 2.

C. Content

Our results on the content variables are singularly uninteresting. In general, they follow the results of their logical determinant companions. That is, where M is high, H is high, and where FM is high, A is high. However, A does rank first on eight of the ten cards, the other two being cards where M and H are high. See Figure 3.

Data from Series B

Tables XXVI, XXVII, and XXVIII present the per cent of total responses represented by each scoring variable for ages 12, 14, and 16, respectively.

Conclusions

In the introduction two points were emphasized. The first was the basic significance of the concept of card-pull to all work with

TABLE XXVII—Per Cent of Total Responses Represented by Each Scoring Variable

Series B—Age 14

		CARD									
Variable		I	II	III	IV	V	VI	VII	VIII	IX	X
W	b	85	83	68	65	84	77	71	44	43	16
	g	72	72	70	69	93	88	83	34	41	19
D	b	10	10	29	20	00	16	20	50	54	80
	g	20	19	30	22	00	10	15	64	56	80
d	b	00	00	03	07	16	03	00	00	00	00
	g	02	00	00	04	07	00	02	00	00	00
Dd	b	05	00	00	08	00	03	03	06	04	03
	g	04	04	00	04	00	00	02	00	02	01
S	b	00	07	00	00	00	00	06	00	00	01
	g	00	04	00	00	00	00	00	02	00	00
M	b	10	24	45	08	00	00	54	00	04	04
	g	09	30	54	04	02	00	44	04	22	08
FM	b	05	03	05	08	38	03	06	44	11	27
	g	15	21	09	13	29	03	15	51	05	29
F	b	53	45	34	60	56	35	31	31	36	49
	g	59	30	33	42	62	28	22	17	32	40
Fc+cF	b	18	07	05	18	00	48	06	00	07	01
	g	04	09	00	31	00	68	12	02	12	02
FC	b	....	10	05	....	....	....	....	08	00	09
	g	....	04	04	....	....	....	....	11	10	13
CF	b	....	03	03	....	....	....	....	11	21	03
	g	....	04	00	....	....	....	....	11	20	03
H	b	07	24	45	07	00	03	43	00	11	03
	g	11	26	50	04	02	00	54	02	22	06
A	b	15	31	29	28	84	16	14	61	18	67
	g	59	49	33	42	81	20	24	72	17	72
Hd	b	07	00	03	00	00	00	20	00	07	03
	g	02	00	02	04	05	02	05	04	05	00
Ad	b	35	17	03	22	12	03	03	03	14	09
	g	13	11	00	16	07	05	05	02	15	07

TABLE XXVIII—Per Cent of Total Responses Represented by Each Scoring Variable
Series B—Age 16

Variable		CARD I	II	III	IV	V	VI	VII	VIII	IX	X
W	b	68	62	63	52	77	67	69	41	38	15
	g	45	48	50	46	67	63	50	20	15	09
D	b	18	19	24	27	03	15	25	57	48	74
	g	30	30	45	26	05	17	40	70	62	87
d	b	03	08	00	21	17	04	06	00	00	00
	g	07	11	02	18	18	06	02	02	08	00
Dd	b	12	03	13	00	03	15	00	03	14	11
	g	18	07	02	10	05	11	08	07	13	04
S	b	00	08	00	00	00	00	00	00	00	00
	g	00	04	00	00	05	03	00	02	03	00
M	b	06	27	45	03	00	00	44	03	14	04
	g	11	09	48	03	08	00	30	00	13	00
FM	b	03	05	03	03	20	00	00	35	03	17
	g	05	35	02	08	15	03	05	37	05	18
F	b	74	43	42	64	73	48	38	35	41	58
	g	70	37	41	49	62	43	60	48	62	69
Fc+cF	b	09	05	00	24	00	44	06	05	07	00
	g	05	11	02	28	03	46	03	00	00	02
FC	b	....	03	05	....	....	....	....	05	21	08
	g	....	04	07	....	....	....	....	09	08	09
CF	b	....	05	00	....	....	....	....	11	03	09
	g	....	02	00	....	....	....	....	00	08	01
H	b	06	24	53	06	00	00	41	00	14	04
	g	20	13	48	05	03	00	32	00	13	03
A	b	29	38	26	21	73	11	09	62	14	55
	g	43	59	34	21	64	03	30	67	26	80
Hd	b	15	03	03	03	07	00	09	00	17	04
	g	07	11	02	05	10	09	07	04	15	03
Ad	b	24	05	08	27	10	19	12	08	17	19
	g	18	13	09	26	15	11	20	13	21	06

projective techniques. Interpretation requires that the clinician be able to evaluate the subject's behavior as unique and meaningful projection or as relatively stimulus-determined response. The second was the fact that, even so, no systematically derived card-pull norms are available in the extensive Rorschach literature. In order to compare an individual subject's response to a card with what responses might be expected of the average subject, the clinician must lean heavily on his own experience plus scattered information from the literature and from his contacts with other Rorschach workers. Nor is it possible to compare the individual Rorschach to theoretical expectancy, since no systematic presentation of theoretical assumptions with respect to card-pull has ever been made.

The authors are in a similar dilemma in interpreting their findings. They cannot be compared to data from other studies, since none are available. In the absence of either norms or theoretical assumptions, the authors have only their own subjective norms as a basis for the interpretation of these findings.

On the whole, the results do not deviate conspicuously from our subjectively derived expectancy. Perhaps their most valuable characteristic is that they *are* norms from a large, randomly selected,

normal group and, as such, have significance for Rorschach interpretive practice.

For example, in view of our findings, we would question the meaningfulness of many familiar statements in Rorschach interpretations such as, "He demonstrates a definite W compulsion which breaks down when he is confronted with the strong emotional stimulation of color on Card VIII." Apparently this is a normal pattern typical of the majority of our subjects.

In the case of texture responses to Card VI, there is another example of the value of card-pull norms. Many interpretations have been made of the failure to use texture on this card. However, our data show that, while texture holds the first rank among the determinants for Card VI, only 46% of the responses to this card were Fc or cF. Consequently, more than half of our subjects *did* fail to give a texture response to Card VI.

These are only two examples of the value of card-pull norms for Rorschach interpretation. It would be possible to list many others. However, the data speak for themselves as evidence that the fact of card-pull can be demonstrated statistically and that similar norms on other groups would be a considerable contribution to adequate work with this and other projective techniques.

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SUMMARIES

History of Form-Level Appraisal in the Rorschach [1]

ALICE JAMES KIMBALL

INTERPRETIVE SIGNIFICANCE OF FORM-LEVEL

The importance of determining how well the responses given by a subject "fit" the inkblot with respect to form was recognized by Rorschach (14). "Sharpness of form visualization" was considered to be necessary for the production of "good-fitting" responses. The presence or absence of such responses was used primarily to differentiate intelligent and unintelligent subjects, on the basis of the theory that sharp form visualization is not possible without assimilative effort on the part of the subject.[2] Rorschach considered sharpness, or clarity of form visualization to be the most significant single diagnostic sign of level of intelligence – an even more important sign than the presence or absence of human movement responses (*M*) in a record, which has been emphasized by later writers.

The logical basis for considering superior form responses to be diagnostic of superior intelligence is that the production of an F+ response is believed to be a complicated process, requiring (a) ability to maintain attention, (b) presence of clear engrams, or memory images, (c) ability to recall clear memory images, an associative process, and (d) ability to select the best, or most appropriate image.

In Rorschach's table of percentages of F+ responses in records of different clinical groups (14, p. 24), the optimum for "normally intelligent subjects" is considered to be from 80 to 95 per cent F+[3]. Unfortunately no indication of the clinical methods used for distinguishing various levels of intelligence is given.

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[1] Adapted from a dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy in the Department of Psychology, University of California at Berkeley. The author wishes to express appreciation to Dr. Jean Walker Macfarlane for her assistance and helpful suggestions, and to Jane Ranzoni and Virginia Ives for reading the manuscript.

[2] Subnormal, manic, epileptic and most organic patients are not, according to Rorschach, capable of this effort, and consequently their responses usually consist of mere perception of the inkblots, with no interpretation offered.

[3] "F+" is used by Rorschach to mean the percentage of accurately seen responses in the total number of responses which are determined primarily by form (*F* responses) rather than by some other determinant. This definition differs somewhat from the meaning assigned to "F+%" by Klopfer and other writers.

It should be noted that the optimum number of F+ responses is not considered to be the maximum number. Not only the best form responses, but also the largest percentage of good forms occur in the records of pedants and depressed subjects, according to Rorschach.

Within the normal range of intelligence, the significance of form-level in a record is considered to vary as a result of several conditions. For example, the more stable the emotions, the better the form visualization.[4] Rorschach also suggested that poor form responses may be related to a shortened span of attention, as in the case of "flighty," elated patients and fatigued subjects.

In present-day publications, form-level has been interpreted by different authors to indicate many characteristics of the subject – characteristics as divergent as "intellectual control – implying, more deeply, stability of character" (2), "Ego strength" (3), "ability to meet reality demands by formal reasoning" (12) and "the general effectiveness of delay of impulse in the subject, and the sharpness of critical control which is exercised in this delay" (12). Although these characteristics of the individual may be related, their use by various authors in interpretations indicates clearly that they are not considered to be synonymous. Diagnostically, the impairment of intellectual control related to poor form-level in a record, has been interpreted as indicating mental deficiency, organic brain disorder, schizophrenia, or senile deterioration (the particular diagnosis depending upon other signs in the record). On the other hand, among normal subjects, Rapaport reports a relatively low F+% in the records of his Control Group and relates this to lack of cultural interests, maladjustment and anxiety (12).

Considering each author's interpretation of form-level in more detail, one finds that Rorschach's use of this category as an indicator of intellectual level has been continued by most writers. Both Beck (2) and Klopfer (9) have confirmed the original findings concerning poor form-level in records of subjects with low intelligence.

In analyzing poor form-level responses, Klopfer and Kelley list nine mechanisms which can produce form discrepancies between concept and inkblot (9): completely arbitrary responses, mechanical perseveration, fixed idea perseveration, partial perseveration, confabulation, confabulatory combinations, inaccurate outline responses, position responses, and disregard for obvious form elements in the inkblots. By identifying each of these mechanisms as it occurs in different records, they believe it possible to distinguish between various structural forms of mental dysfunctioning–retardation, deterioration, and even interference from emotional disturbance in normal subjects.[5]

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[4] However, Rorschach reports that the diagnosis of emotional instability from consideration of form-level is complicated in the case of neurotics and artists. These subjects, and occasionally some schizophrenics, "combine good form visualization with unstable emotional tone." (14)

[5] It should be emphasized that poor form-level, like other so-called "pathognomic signs" in Rorschach records, is not specific for any single disorder, but is likely to occur in records of patients with widely diversified clinical symptoms.

The chief clinical classifications in which Rorschach records are likely to be characterized by poor form-level are (a) mental deficiency, (b) schizophrenia, (c) organic pathology, and (d) manic states. Each of these classifications will be considered in more detail.

(1) *Mental Deficiency:* Klopfer and Kelley (9) consider that of all factors listed by Rorschach as being related to intelligence, only the F+% stands up as a single variable "with adequate statistical validity." (The statistical methods used to test validity are not indicated.)

Beck's definition of the F+ percept corresponds closely to that of Rorschach. In interpreting a record, Beck considers that the F+ finding varies principally with intellectual endowment and affective state of the subject. Beck writes (3):

> "The 60 per cent point as critical minimum for the healthy was originally set empirically. The statistical findings corroborated it . . . any F+ score of less than 60 is below the limit for normal as represented by this control group. That is, such a score belongs to an individual in some other personality group." (p. 20)

Beck's tabulated norms for F+% for different levels of intelligence are similar to Rorschach's original findings.

(2) *Schizophrenia:* There is widespread agreement among writers that patients in this classification, particularly in advanced and deteriorated stages, give Rorschach responses with poor form-level. However, it must be emphasized that no single Rorschach characteristic or Rorschach personality picture has been found to be typical of schizophrenic patients in general. Segregation of different types of schizophrenia on the basis of F+% has been suggested by Rickers-Ovsiankina (13) and by Rapaport (12), and is considered by Klopfer to be the first task of Rorschach workers.

Among the twenty signs assembled by Klopfer and Kelley as possibly indicating schizophrenia in a record, two are concerned with form-level: low percentage of F+ responses, considered by Beck to be the factor with the highest discriminative value (1), and extreme variability of form-level within the record.

(3) *Organic Pathology:* Piotrowski indicates that an F+% below 70 can be considered to be one of the ten most reliable signs of cortical and sub-cortical pathology (11). However, since Klopfer finds that as low an F+% as 70 occurs in the records of several other types of patients, he considers poor form-level to be only an accessory sign. Similarly, combinations of good form and poor form within a record may represent organic deterioration, although as indicated above, they are more characteristic of the records of schizophrenic patients.

In cases of encephalitis, records are characterized by an F+% between 50 and 70, accompanied by several other signs. Other kinds of serious brain damage which may be indicated by poor form-

level in the record are general paresis, certain types of epilepsy, brain tumors, post-traumatic states, arterio-sclerotic deterioration, and many acute infectious processes, atrophies and senile states. In general, any patient suffering from serious brain damage is likely to reflect an impairment of intellectual functioning (memory loss, poor concentration) in a lowered form-level.

(4) *Manic States:* Klopfer and Kelley report that all manic patients are likely to give confabulatory, careless and poor whole responses, which lowers the F+%. With decrease in control, as mania becomes more intense, the F+% drops even more (9). Beck also reports the lowest F+%'s in records of patients with manic excitements (2).

Most writers agree with Rorschach's finding that depressed patients' records show the highest F+%'s. Some psychoneurotic patients (particularly obsessive-compulsive cases) also give extremely accurate form responses.

Within a "normal" group, the form-level of responses can be expected to vary with several factors besides level of intelligence, as indicated by Rorschach. Extreme color and shading shock are often evidenced by a lowering of form-level on the colored or achromatic inkblots, respectively (4). Since color and shading shock are considered to indicate emotional disturbance, it is not surprising that Rapaport discovered what he believes to be significant differences between the form-level of responses of "Well-adjusted" and of "Maladjusted" normals (12). Klopfer found evidence of color shock, usually shown by lowered form-level, in the records of most psychoneurotic patients and approximately one-fifth of his normal subjects (9).

Rapaport's Findings on Form-level: Rapaport's treatment of the meaning and interpretation of F+% in Rorschach records is extensive and sufficiently different from that of other authors to merit individual consideration. He considers the form-level of a record to be the result of interaction of the perceptive and associative processes, and the critical controlling attitude of the subject. Therefore, poor form-level may give several different diagnostic indications, depending upon which of the related processes is impaired. By differentiating between different kinds of incongruent form responses, Rapaport believes he can point out the significance of such responses in a given record.

Rapaport (12) reports statistically significant differences between several groups of subjects with respect to level of F+%; therefore he considers this category to be a "diagnostic indicator." His results for different groups of subjects follow:

(1) Patrol Group (normals): A low F+% was found to be related to maladjustment and anxiety, whereas a high F+% along with many particularly sharply perceived forms occur in the records of "well-adjusted patrolmen," especially those with cultural inter-

ests. The normal range for F+% is set by Rapaport at 65 to 80.

(2) Schizophrenic Group: The average F+% was found to be lowest in cases of chronic and deteriorated schizophrenia, and to be approximately at the minimum acceptable for normals in the records of acute cases who are still attempting to keep a hold on reality. Moreover, within this group, schizophrenics with paranoid symptoms were found to have an average F+% approximating that of a group of early acute cases, whereas the simple schizophrenic cases approach the low level of the more advanced cases. Other sub-groups showing low average F+%'s are the preschizophrenics, the coarctated preschizophrenics and the over-ideational preschizophrenics.

(3) Depressive Group: Patients in this group showed an increase in vagueness, but on the whole adequate or even high F+%'s, along with over-cautiousness which is reflected in excessive control and delay of response. The F+% is found to be higher as the scale progresses from psychotic depressives to mild depressive neuroses.

(4) Neurotic Groups: Only the neurasthenics, with weak perceptual organizing ability, have an average F+% below the normal range set up by Rapaport. High F+%'s are indicated for most hysterics and obsessive-compulsives.

Turning to a consideration of what Rapaport terms "special F+%," and "special F−%" as diagnostic indicators,[6] the schizophrenic patients (excepting chronic and deteriorated cases) are most likely to give several very clear, well-perceived form responses, even though the over-all F+% may be lower than for normal subjects. This irregularity in performance of schizophrenic patients has been noted earlier. The depressives, on the other hand, although showing high F+%'s, usually attain very low "special F+%'s," while the neurasthenic patients are low in both F+% and "special F+%." According to Rapaport, the differences between these groups when subjected to the Chi test, are "mostly statistically significant or highly suggestive."

Groups with high "special F−%'s" are the chronic and deteriorated schizophrenics, preschizophrenics, acute schizophrenics, neurasthenics and psychotic depressives. All other depressive groups show low "special F−%'s" in their records.

Beck's Use of F+ and F−: One other interpretation of F+ and F− responses should be mentioned – Beck's designation of this category as an index of "Ego strength" and respect for reality (3).

[6] "Special F+%" is defined as the percentage of markedly well perceived forms and "special F−%" indicates the percentage of definitive but arbitrary form responses. "Fv%" is defined as the percentage of forms with inherently vague, undefined outline, and "Fo%", the percentage of frequent, adequate but undistinguished forms.

Beck reports, in applying the criterion to several personality groups, that "the weaker the Ego, the more F– percepts appear," and that the converse is also true. On the basis of this relationship, he predicts a large number of F– percepts in the records of young children whose Ego's are not yet developed. The schizophrenic likewise is not accepting the world's standards of values, which is the reason, according to Beck, for his symptoms' reflecting a total disregard for these standards – a regression of the Ego. Similarly the brain damaged and the feebleminded do not respond to such world standards. In all such cases, Beck considers the F+% to be an index to "firmness" of the Ego. In this manner, the F+ score becomes a measure of "the stability of the personality."

Summary of Interpretive Significance of Form-level. In summary, later writers agree, for the most part, with Rorschach's findings, particularly with respect to form-level in the records of the mentally deficient, schizophrenic and brain-damaged groups studied. Most writers agree that the critical minimum F+% for normal subjects is approximately 60, although affective disturbances and anxiety may depress this percentage somewhat.

It should be noted that very few Rorschach "signs" have been found to be specific to particular disorders, and it is reasonable to expect that if form-level is related to intellectual dysfunctioning in general, any clinical disorder which affects intellectual performance will be associated with a lowered F+%. Moreover, since concentration is required in the Rorschach test as well as adequate intelligence, the flightiness associated with manic states would be expected to interfere with the production of "accurate" or "good" forms.

Rapaport's study represents one of the most systematic attempts to date to compare a large group of normal and abnormal subjects with respect to behavior in the Rorschach situation, and to relate this behavior to extensive information about each subject. In view of the fact that many of the differences reported between his groups are found to be statistically significant at the 1 or 2 per cent level, and a few others at the 5 per cent level, Rapaport's "diagnostic indicators" involving form-level deserve careful consideration, even though statistical significance at these levels does not mean high diagnostic predictability for individuals.

However, there is no assurance that Rapaport's Control Group of "normal subjects" – patrolmen – can be considered representative of the general population. (Rapaport reports on the basis of his interview material that he believes the Patrol Group subjects to be somewhat more constricted than "average.") Moreover, it is not known whether statistically significant differences between subgroups may be present within the general population of "normal individuals."

When Rapaport divides his Patrol Group into the three levels of "Well-adjusted," "Borderline-adjusted" and "Maladjusted," the number of cases in each sub-group is 32, 17 and 5, respectively. The results of comparisons involving a group of five individuals cannot be considered to be conclusive.

Lack of Agreement in Evaluating Form-level

Form-level has been variously defined in terms of "percentage of clearly visualized forms," by Rorschach (14), "form accuracy," or "degree of correspondence between his [the subject's] concept and the given form qualities of the blot," by Klopfer (9), and "congruence with the inkblot," by Rapaport (12). Beck, like Rapaport, defines form-level in terms of the correspondence of the response with the "reality" that obtains in the inkblot (2). Inspection of these definitions of form-level would lead to the assumption that there exists a fair amount of agreement among Rorschach examiners, first with respect to the "perceptual reality of the inkblot" with which the response is to be compared, and second, concerning whether or not any given response corresponds closely to this reality.

When the form-level scores which have been published by different authors are compared, however, no such agreement is apparent. In many cases the same response has been scored F+ (good or accurate form) by one author, and F− (poor or inaccurate form) by another. These differences may be the result of lack of agree-

Table I — Percentage of Agreement between Beck and Hertz on 165 Rorschach Responses Scored for Form-level by Both Authors[7]

Card	Number of Responses Scored by Both Authors	Percentage Agreement	Percentage Agreement Omitting *P* Resp.[8]
I	40	75	72
II	7	70	50
III	3	66	66
IV	30	70	61
V	22	55	44
VI	21	38	35
VII	18	89	89
VIII	12	83	83
IX	5	80	80
X	7	57	57
	Total: 165		

[7] All 165 responses were taken from the published lists of Rorschach responses scored for form-level by Beck and Hertz. See Beck, S. J. *Rorschach's Test, Volume I: Basic Processes.* New York: Grune and Stratton; 1944, pp. 156-190 (2), and Hertz, M. *Frequency Tables to Be Used in Scoring the Rorschach Inkblot Test.* Brush Foundation, Western Reserve University, Cleveland, Ohio, 1936 (6).

[8] Popular responses, scored "P" on the basis of frequency of occurrence, by either author.

ment among workers concerning the "perceptual reality" of the inkblot, differences in the standards and criteria which different workers use for comparison of the response and inkblot, or an interaction of both of these factors.

In Table I the percentage of agreement between Beck and Hertz in scoring 165 Rorschach responses for form-level is shown.

The responses which were scored differently by the two authors are listed in Table II:

TABLE II — Rorschach Responses on Which There is Disagreement between Beck and Hertz in Published Form-level Scoring

Responses	Scoring * Beck	Hertz
CARD I		
Clouds	+	→ −
Crab	+	−
Sky	+	−, O−[10]
Chest (animal)	↓ −	+
Clown	−	+ ("man")
Human body	−	+ ("skeleton of body")
Insect	−	+
Wasp	−	+
Crown	−	+
Fly	−	+
CARD II		
Bug	−	+
Map	−	+
Sun	− ("eclipse")	+ ("sun setting" or "sun coming up")
CARD III		
Spider	−	↓+
CARD IV		
Buffalo head	+	− ("animal head")
Oriental structure	+	− ("structure of some kind")
Statue	+	−, O−
Beetle	↓ −	↓+
Bug	−	+
Eagle	−	+
Flower	−	↓+
Flying night bird	−	+ ("bird")
Insect	−	+
CARD V		
Bulls in fight, or rams bucking..	+	− ("animals fighting, charging, crashing")

* Symbols ↓, →, ← refer to the way the card was held for the response, apex indicating top of card. Unless otherwise indicated, card was held right-side-up. Where the exact wording of the response differs from that reported in the first column, the response as actually scored by the author is shown in parentheses. All responses are W (Whole responses) and they are shown without inquiry material, as published.

[10] "O" indicates "original" or rarely given response.

Responses	Scoring Beck	Hertz
CARD V *(Continued)*		
Bridge	+	−, O−
Cloth, black	+	−, O− ("material torn, sewed")
Persons in hammocks	↑↓+	↓−
Bee	−	+
Beetle	−	+
Bug	−	+
Fly	−	+
Mosquito	−	+
Owl	−	+
CARD VI		
Church, cathedral	+	− ("building")
Fountain	+	−
Human	↓↑+	↓− ("person")
Oriental structure	+	− ("oriental building")
Statue	↑+	↓−
Brush	−	+
Bug	↓−	+
Butterfly	−	+
Duck flying	→← −	↑+
Duster	↓−	↓+
Fish	−	+
Moth	↑−	↓+
Whale, shark	−	+ ("sea animal")
CARD VII		
Necklace	+	− ("beads")
Shrubs	−	+
CARD VIII		
Iris	↓+	↓−
Christmas tree	+	−, O−
CARD IX		
Map	−	+
CARD X		
Animals	+,−[11]	−, O−
Insects	+,−[11]	+, O+
Butterfly	−	+, O+ ("in parts")

The reasons for the wide deviation in form-level scoring shown in Tables I and II are many:

Sample Differences: The population of Junior High School students on which Hertz's frequency tables were developed may be different from Beck's group of subjects. Beck's "normal adults" are not described, and apparently no systematic effort was made to select a sample representative of the general population. Comparisons between authors' scoring based on norms derived from the records of two very different groups of subjects violate the important principle of restriction of norms to populations similar to the

[11]Note: Beck scores these responses twice, as W F+A and D F−A, because of the inaccuracy of some of the forms which are included by making these whole responses to Card X.

one used for standardization. However, Beck's list was published with the expressed purpose of training Rorschach workers to develop standards for scoring form-level – presumably in any records they may score. In other words, Beck, without a description of the sample on which his norms are based, attributes great generality to his list of good and bad forms, as if it could be used as a general scoring standard.

Hertz explicitly states that her frequency tables should be used for scoring only the records of subjects represented by her standardization group. Undoubtedly one reason for the low percentage of agreement shown in Table I is that Beck's and Hertz's populations differ markedly. The unfortunate results of applying one author's scoring norms to another's varying clinical population must be apparent from a consideration of results presented in Tables I and II.

Different Scoring Criteria for Form-level: Hertz used frequency of occurrence of each response in the records of her subjects (supplemented with her subjective judgments of similarity to frequent responses and the judgments of three to five independent judges on doubtful, infrequent responses). Beck, on the other hand, used differentiation between normal and abnormal subjects, plus his subjective comparison of "new" responses with old ones "known" to differentiate. These scoring criteria are compared and discussed in the next section.

Different Basis for Selecting Responses for Publication: Specific examples of form-level scoring included in the lists of the two authors were selected differently and for different purposes. Hertz apparently includes in her frequency tables all responses given by her 300 subjects, with a form-level score for each response. Beck's list, on the other hand represents a selected sample, including (a) very common responses, considered to be the nucleus of F+, and (b) a large number of doubtful or deviating responses neither clearly F+ nor F–, on which examiners usually want help in making decisions. Obviously, inclusion of the first group of responses would tend to raise the percentage of agreement between the two authors, whereas the latter would lower it. Unfortunately, Beck does not differentiate between the very common and the borderline responses in his list.

Responses "Seen" in Different Ways: In any study of extent of agreement in scoring, it is essential that both authors score, as nearly as possible, exactly the same response. It is a well-known fact that even the most frequent, "popular" Rorschach responses can be seen in many different positions and locations in the inkblots. With no inquiry material included by either author, it is impossible to be sure that both authors are scoring the same response, even though it may be labelled and scored the same for location. Since the form-level of a response varies with the position

and location of the concept, no lists should be published without specification of at least these characteristics.

Scoring of Vague and Variable Forms: The disposition of responses with vague or variable form by the two authors considered accounts for some of the differences in scoring noted. Hertz apparently adheres most strictly to frequency of response, disregarding whether the response as given is specific in form or vague or variable. It is impossible to determine the influence of vagueness and changeableness of form on Beck's form-level scoring since no consistency in scoring such responses is apparent in Table II.

In interpreting the data presented in Table I it should be noted that the percentage of agreement is lowered unduly by the inclusion of several insect or bird forms (e.g. Card V), where undoubtedly a single difference in the principle underlying the scoring accounts for all disagreements.

Methods of Determining Form-level

There have been two main lines of development in form-level scoring, although many authors have used combinations of both kinds of methods:

(1) Quantitative methods:
Hertz's use of frequency of occurrence in Rorschach records for each response (supplemented with subjective evaluation in cases of extremely infrequent responses)
Beck's criterion of differentiation between normal and abnormal groups, based on the frequency of occurrence of each response in the records of "normal" subjects and of patients.

(2) Qualitative evaluation of responses by the examiner:
Klopfer's scoring on the basis of "accuracy" of the response
Klopfer-Davidson scale for form-level rating
Rapaport form-level scoring, based on a combination of qualitative and quantitative criteria.

Each of these methods will be considered in detail, following a brief statement of Rorschach's method of form-level scoring.

Rorschach's Method of Scoring F+ and F−. Rorschach based his evaluation of form responses on a comparison with responses previously obtained from subjects diagnosed as feebleminded and from other groups of patients. Responses which had been given frequently by individuals of at least average intelligence were scored F+. He indicates that by use of this criterion, many responses were considered F+ which would not be considered good on the basis of subjective estimation. Inspection of his samples of form-level scoring also indicates that he scored some responses F+ on the basis of subjective estimation which did not occur frequently in his published records. In other words, he used a quantitative

approach, but supplemented it freely with subjective evaluation of each response. Apparently the "popular level" of the most frequently given responses was used to set up a range for clarity of form visualization. Whether in actual practice he used *levels* of clarity of form visualization to divide further his normal and abnormal groups of patients is not indicated in his published work.

Present-day Methods for Scoring Form-level. In form-level scoring today, the greatest disagreement arises in consideration of borderline responses, which are often given by both normal subjects and patients. Further disagreement stems from efforts to make fine differentiations between different levels of intelligence within groups of normal subjects.

(1) *Quantitative Methods, Based on Frequency of Occurrence in Rorschach Records.* Rorschach wrote that statistical methods should be used to overcome subjective decisions in scoring. On the assumption that responses which occur most frequently in the records of normal individuals are those most clearly or keenly perceived, frequent responses are scored F+ by many writers.

Hertz has described in detail her statistical method, based on frequency of occurrence, which was used in scoring form-level in the Brush Foundation study (7). All responses which occurred thirteen times or more in the records of 300 normal adolescent subjects studied were scored F+.[12]

Strict adherence to the above rule would make the scoring of form-level objective and consistent within the study. Moreover, providing the sample of subjects is representative of that age group in the general population, Hertz's published frequency tables should solve the problem of form-level scoring in records of subjects of this age.

However, many responses which were given infrequently by Hertz's subjects were very similar, and apparently just as "good" as the frequent ones, often differing only in the specific wording. In such cases Hertz scored the response F+ on the basis of similarity to frequent responses. At this point the statistical criterion is supplemented, and even replaced, by a subjective decision on the part of the examiner concerning degree of similarity. Actually, Hertz is then using the same system suggested by Rorschach, of statistical frequency of occurrence plus examiner judgment on infrequent responses.

A further subjective decision occurs in the Brush Foundation scoring on all infrequent responses which are not sufficiently similar to frequent responses to be considered F+ without doubt. These

[12]This criterion was adopted after consideration of the distributions of frequencies of occurrence for the responses. A characteristic break was noted for each curve, approximately at the median, which fell in most cases between frequencies of 11 and 15. For this reason, 13 was selected as the minimum frequency of occurrence for a score of F+.

responses were scored by three judges independently, and in cases of discrepancy between these judges, two others were consulted before a decision on scoring was made.[13]

The inadequacy of a strict statistical frequency criterion for form-level scoring has been indicated also by Oeser, who says (10),

> "There are a certain number of forms on each plate that are seen by nearly everyone. These are called F+. Others have to be judged on their individual merits." (p. 304)

Beck (2) also recognized the inadequacy of frequency of occurrence as a criterion for form-level scoring:

> " . . . no fairly large number of persons in good or any other mental condition give any considerable set of responses 'most frequently.' The exceptions are the *P* associations." (p. 155)

For this reason Beck set up "differentiation between normal and abnormal individuals" as his criterion for F+ and F− scoring. The forms seen by normal subjects with good intellectual control are considered to be the reality that obtains in the blots, and are scored F+, whereas those seen by feebleminded and schizophrenic patients are not real, and are scored F−. In order to score form-level in this manner, Beck must assume (a) a reality for each inkblot upon which normal individuals, including Rorschach examiners, will agree, (b) a difference between responses given by normal subjects and those given by patients, and (c) ability on the part of the examiner to judge the accuracy of each response in terms of degree of correspondence with the reality of the inkblot.

The chief difficulty arising in the use of the criterion of differentiation between normal and abnormal subjects, pointed out by Beck himself, concerns scoring totally new responses which have been given neither by normal nor abnormal subjects in the experience of the examiner. Beck suggests that the examiner make a subjective comparison of the new with the old in such cases, relying on "validated experience with the test" and "judgment that grows out of direct clinical acquaintance with the several groups" (2). However, this alternative seems to represent precisely the type of subjective scoring, based on varying individual clinical experience and private, "intuitive" norms which Rorschach workers must avoid if they hope to make scoring a matter of public, reliable, well-defined criteria.

(2) *Qualitative Evaluation of Responses.* Klopfer and Kelley have formulated guiding principles to be applied in judgments of "accuracy of a response," or whether or not the subject has considered the important features of the inkblot. The use of the term "accuracy" again implies some "perceptual reality" in the inkblots

[13] Unfortunately, in the final published frequency tables, no distinction is made between responses scored F+ or F− purely on the basis of frequency of occurrence and those scored on the basis of decisions of three or five judges.

on which many or most normal subjects agree.[14]

Elaboration of details, indicating keeness of perception, is used by Klopfer and Davidson (8) as a measure of form-level in their scale. Klopfer's scoring is based on a three-fold classification, F–, F and F+, where a score of F indicates responses with indefinite or mediocre form. Unlike Rorschach, Klopfer reserves the use of F– exclusively for the scoring of responses "where the examiner finds evidence of marked discrepancies between the form qualities of the concept and the form qualities of the blot," and F+ only for markedly superior and keen form responses.

In Klopfer's system, unlike that of Hertz described above, the most frequently given responses do not receive scores of F+, but are rated simply F. According to Klopfer " . . . concepts of mediocre form accuracy are given most frequently by normal subjects." (9, p. 157) The form-level score is based on consideration of (a) the form qualities of the inkblot, (b) the form qualities of the concept as imagined by the subject, and (c) the conventional form qualities of the same concept.

The scale proposed by Klopfer and Davidson is a fifteen-point one, extending from "–2" through zero to "+5," with .5 intervals between.[15] Each response is compared with the "popular" or most frequent responses. The comparison is made between the "total outline characteristics of the blot area" and the "generally accepted form qualities of the concept" given as a response.

This scale represents an attempt to define more carefully form-level scoring, since for the first time consideration of the characteristics determining the "accuracy" of the response are required. Specific standards are set up for F+ and F– scoring. However, although the final decision on form-level is expressed in terms of quantitative units, and may therefore look more "precise and objective," each of the steps involved in the use of the scale requires the same kind of subjective decisions as those made by Rorschach in his scoring of clarity of form visualization. Furthermore, it is possible that many little judgments may offer more opportunity for error, and may therefore be less reliable than larger gestalt judgments.

[14]This does not mean that all subjects should be expected to give the same responses in the Rorschach situation – "projection" in such free, unstructured tests would, of course, preclude this.

[15]A rating of "–2" indicates "usually psychotic"; "zero," form element indefinite "or is completely disregarded in favor of shading, color, or abstract movement"; "+5," "very bright." Popular responses automatically receive a "1.0." After a basal rating is assigned for "accuracy" of the total outline characteristics of the concept as compared with the inkblot, credits of .5 are added or subtracted for spontaneous elaboration in terms of: (a) specification of specific elements within the chosen area for justifying, refining and elaborating the concept chosen, and (b) organization, combining various blot areas into a meaningful area, whether the whole or part of the blot is used.

The following subjective evaluations on the part of the examiner are required in the use of the Klopfer-Davidson form-level rating scale:

(1) In assigning a basal rating, the examiner compares the response with a composite of different "popular" responses – an abstraction derived from his own experience with the so-called "popular-level" responses. The ten responses scored "popular" on the basis of frequency of occurrence by Klopfer are extremely varied, as are the inkblots themselves – moreover, they can be seen in a great many different ways with respect to orientation and position. To abstract a "popular level" based on such a composite undoubtedly results in very different standards for different examiners. Furthermore, to consider these ten responses equally accurate is to make frequency not only a criterion for accuracy, but synonymous with it.

Studies of the reliability of basal ratings are badly needed. A subjective decision concerning how well a response which can be seen in many different ways fits something else which varies with different examiners, is likely to make reliable scoring difficult.[16] Moreover, it is doubtful if there is close agreement among examiners concerning the "generally accepted form qualities of the concept given in response to the blot area." It is apparent that the reliability of the final form-level rating depends first upon agreement among examiners on the basal rating. If differences appear at this point, covering them up by adding credit for details amounts to rejection of the rating scale in favor of a return to a "total, overall judgment."

(2) A basal rating of "+1.5" is to be given for responses which are "frequent but not popular," or "popular with an original twist." Again this indicates confusion between the criteria of frequency and accuracy. It is one thing to say that popular responses must be considered accurate because of their frequency of occurrence in records, and quite another to say that less frequent responses are more, or less, accurate than the popular ones. The decision on accuracy in cases of both "frequent but not popular" and "popular with an original twist" rests on the examiner's evaluation of the response, as it did in the Brush Foundation scoring.

(3) The amount of credit to be assigned for details involves further subjective decisions, although since details can be seen and enumerated, agreement among examiners may be easier to reach. Subjective decisions must be made on the following:

(a) *How* essential is the detail which is added by the subject; does it "justify or refine" the original concept, or is it irrelevant or "mere embellishment?"

[16]Careful inquiry can overcome this difficulty to some extent; however, even with intensive inquiry, often the examiner cannot be sure of the exact position and orientation of the response given by the subject.

(b) Does the added specification make the concept "more crude, sloppy or infantile?"

(c) Does the addition affect only the periphery of the concept, or is the core disturbed?

(4) The further requirements, that (a) specifications "must exceed the essential elements of the concept," by mentioning a part of a concept not usually included, or pointing out a specific position, (b) details must be independent of each other in order to receive two units of credit (both snout and ears of animals cannot receive credit, nor can eyes and eyebrows), and (c) the use of other determinants counts only when the concept is made "more precise" – all rest upon the judgment of the examiner.

(5) Credit can be given only for spontaneous specification of details, or for specification given in response to "general inquiry questions" of the examiner. The point at which general questioning ends and prodding begins is decided in each case by the examiner. Certainly the number of spontaneous details offered by the subject will be determined in large part by the method of inquiry and the general attitude of the examiner.[17]

Undoubtedly such subjective decisions are basic and necessary for judgment of form-level, and it is essential to segregate them for consideration; nevertheless, they remain qualitative and subjective even when represented by numbers on a scale. It is in making these judgments that Rorschach students are having great difficulty in applying the new form-level scale. In view of the number of subjective decisions required before a final rating on form-level can be assigned according to this scale, it seems unlikely that the end result can be "reliable" in the sense that different examiners, with varying clinical experience, will agree consistently on the final score.

In our opinion, over-all, or average agreement on form-level in a Rorschach record is not an adequate indication of reliability of scoring, since such agreement can often be reached by inspection, without the use of a quantitative scale. It seems reasonable to demand that if a quantitative scale is to be used it must be shown to be "more precise and objective" with proof of greater reliability and predictive value. To date no statistics have been published on the reliability of the ratings of individual responses, using this scale.

The form-level rating scale proposed by Klopfer and Davidson is, in their words, "in an experimental stage and is offered at this time in order that research workers may experiment with it." (8) However, from a practical point of view, it is unfortunate that it

[17]The wide diversity of methods of administration of the Rorschach can be illustrated by contrasting Rapaport's technique of urging the subject to see more on each card as he goes through them the first time, with that of Klopfer, who gives the initial exposure to the ten cards without comment.

is being taught and applied widely, often by beginners in Rorschach administration and interpretation, as a result of its being appended to the latest edition of the Klopfer-Kelley book on Rorschach technique (9).

Rapaport's Method of Scoring "Form-quality." Rapaport, like Beck, apparently bases his judgments of "form-quality" on congruence of the response with the "perceptual reality of the inkblot" (12). The inkblot must show enough points of congruence to the shape of the concept for the response to be considered "acceptable" (F+). No elaboration is offered concerning how many points of congruence must be shown, or whether or not some points may be more important in determining the form-quality score than others.

In scoring form-level, Rapaport uses F+, F−, "special F+," "special F−," "Fv" and "Fo" (see discussion, above). He also uses "F±," indicating "an essentially good response, with some traces of weakness of perceptual organization in it," and "F∓," which indicates "an essentially poor response, but with some traces of good perceptual organization."

In his treatment of form-quality, Rapaport does not discuss the problem of extent of agreement among examiners concerning the "perceptual reality" of the inkblots, used as a standard for comparison. After a word of caution to examiners on the tendency to empathize too freely with certain kinds of responses, he continues to use a mixture of frequency of occurrence and empathy with the response as a basis for scoring form-level.

Conclusions on Methods for Determination of Form-level

From the foregoing survey of the history and present-day use of form-level rating in the Rorschach certain specific problems emerge which need further investigation:

(1) Are Rorschach workers justified in assuming and referring to "the given form qualities of the inkblot," or "the perceptual reality of the inkblot"? To what extent will normal adults in the role of Rorschach examiners agree on the "particular features of the inkblots"? If examiners perceive the inkblots differently, on what can they base their decisions regarding "accuracy" of the responses given by their subjects? Can Rorschach workers hope to make form-level scoring reliable when the "standard characteristics" of the inkblots, with which each response is compared, are not defined and agreed upon?

(2) The criteria for scoring F+ and F− vary greatly for different authors: frequency of occurrence, differentiation between normal and abnormal subjects, empathy on the part of the examiner, and subjective evaluation of the degree of correspondence between the response and the "perceptual reality" of the inkblots have been used as a basis for form-level scoring. In many cases workers have followed Rorschach in using statistical frequency sup-

plemented by the examiner's evaluation of infrequent or borderline responses. The logical inconsistency of adopting a criterion and arbitrarily changing to another when the first is inadequate, is apparent, and is not likely to result in reliable scoring.

(3) It has been shown that each criterion for form-level scoring must be supplemented to some extent by the examiner's judgment concerning correspondence between response and inkblot. Use of the scale proposed by Klopfer and Davidson requires many subjective decisions on the part of the examiner, and the end result can be no more precise or reliable than these decisions, whether expressed in quantitative terms or not. Such evaluations are undoubtedly influenced by the empathy or lack of empathy of the examiner for (a) the inkblot, (b) the concept given as a response by the subject, and (c) the concept as a response to a particular inkblot or blot area.

We cannot agree with Rapaport that a "simple test" of self-interrogation can overcome differences among examiners with respect to their readiness to empathize with a given response. Wide differences in background, training, personality characteristics and Rorschach experience make it unlikely that agreement can be reached simply or easily. Klopfer and Kelley (9) and Brosin and Fromm (5) have recognized the problem of examiner-involvement in form-level scoring, recommending intensive training and discipline under a recognized expert in Rorschach administration and interpretation as the only method of overcoming interference from the presence or lack of empathy for responses. However, since Rorschach interpretations are and undoubtedly will continue to be made by workers without the benefit of such intensive training and discipline, there is urgent need for formulation of a sounder basis for form-level scoring than undefined subjective evaluation.

(4) Form-level scoring is further complicated by the use of different scoring systems by different workers, some scoring only F+ and F−, others adding plain F, and still others using four or more different classifications. It would be most helpful to students if different authors would compare their notations for form-level so that some statement of the relationship between different categories could be formulated.

At present, each author's form-level scoring must be interpreted in the light of the criteria he uses and his own definition of form-level. Furthermore, since no large representative sample of the general population has been studied with respect to Rorschach performance, the published norms for all Rorschach variables must be restricted to the records of subjects represented in the group studied by the author. Until all Rorschach workers can agree concerning the criteria for form-level scoring (or at least until they make explicit the cues in each record upon which they make their form-level estimates), such statements as " . . . the weaker the Ego, the

more F— percepts appear," (3, p. 21) cannot have the same meaning for different readers, and thus cannot be validated by comparison with the experience of other clinicians.

With the increasing clinical conviction of the diagnostic importance of form-level in Rorschach records, the need for reliable methods of appraisal of form-level has become acute. No longer are clinicians content with a general statement concerning normality or abnormality based upon superior versus distorted or inaccurate form-level in Rorschach records. Now they are attempting to establish and predict levels of intelligence, in terms of I.Q. scores in some cases, on the basis of fine differentiations made between form-level of different responses in each record. Moreover, such diagnoses as "schizoid tendencies" are being made in cases of slightly distorted form-level. If such fine differences in interpretation are to be justified, it is essential that form-level scoring be made reliable and standard, so that the problem of validity can be studied. It is probable that much of the disagreement among authors concerning the interpretive significance of form-level arises from differences in definition and methods of scoring it.

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CASE STUDIES

Some Interrelationships Among Four Tests Comprising a Test Battery: A Comparative Study

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INTRODUCTION

In the area of personality testing, the need for utilizing more than one means of personality appraisal is continually being stressed. Through the use of more than one means of diagnosis certain findings may be checked and others implemented so that a more reliable, better differentiated and more complete personality picture may be obtained.

This paper seeks to consider the subtler ways in which four sources of information corroborate and supplement each other. For this purpose, the complete test records obtained from a specific case, the respective interpretations, and a discussion of some of the interrelationships of this material are presented.

The test battery under consideration here consists of the Stanford-Binet, the Rorschach test, the Despert Fables (Revised Form) (3), and the "H-T-P" (House-Tree-Person) test (1). This particular combination is being employed in the child guidance department of a New York hospital. The writer, interested for some time past in determining the adequacy for use with children of various test combinations (2), has also worked with this battery in the child guidance department of a group work agency. As yet, not much has been published about the corroborative and supplementary relationships to be found when using a test battery.

It is not within the scope of this paper to discuss the full "systematic-theoretical" considerations involved in the selection of the present test battery. It should be mentioned, though, that the Rorschach and House-Tree-Person tests are by and large expected to indicate the general personality picture, the Fables to concretize to a degree this general personality picture especially in the area of inter-personal relationships, and the Stanford-Binet to narrow the "estimation limits" of the information on intelligence and level of intellectual functioning obtained from the Rorschach and House-Tree-Person tests.

EXCERPTS OF THE CASE HISTORY

This is the case of Richard, a ten-and-a-half year old Negro boy who was referred to the clinic because he wet his bed during the

[1]The writer wishes to express his thanks to Dr. Hans L. Epstein for the advice and assistance given during the writing of this paper.

night, and because he was declared unruly and unmanageable at home by his mother.

A "team" of case worker, psychologist, and psychiatrist worked with this case. However, the psychological tests were administered and interpreted "blind". After the interpretations were finished, they were compared with, and received substantiation from the case worker's and psychiatrist's findings.

Richard is the eldest of three children. He has a brother of nine, and a sister of five. His parents immigrated to this country from the British West Indies. All the children were born in this country.

The parents do not live together. The children are with the mother. They receive a relief allotment of $139.00 per month from the Department of Welfare, and live in an under-privileged section of Harlem.

There is a history of parental separation and reunion. The first separation occurred when Richard was four, the final one when he was six: the father "just walked off" and has never returned. The mother stated that her husband had gambled, had been a poor provider, and had had relations with other women. However, she misses him now. At the time of the interview, the mother gave the impression of being a lonesome and dissatisfied person who feels inadequate, is very sensitive to criticism, and feels easily threatened. She shows little understanding of children.

The two boys seemed to have been very much attached to the father. However, the mother claims that the second son was the father's favorite.

Richard's nocturnal enuresis began when he was four, at about the time of the parents' initial separation. Previously he had cried out for his mother during the night. Until two years ago, the boy would call his mother after wetting the bed. From that time on he continued to wet, but did not call her. There is no physical cause for the enuresis, and generally, Richard is a physically normal youngster. He is retarded in his school work. There have been complaints from the school to the effect that he is boastful, shows off, and is unruly. He is easily provoked into fights by others, and frequently provokes fights himself. His mother claims that he is unmanageable at home, is surly and negativistic in his behavior toward her, and resents and seeks to flout her authority.

Behavior During Testing Situation

After twenty minutes of testing, Richard became restless, stood up and walked around for several minutes. Then he was comparatively still for another twenty minutes. Again he walked around, and then resumed his seat. All during the testing situation he was suspicious of what the examiner was writing. He would crane his neck to gain a better view, and several times asked what "this and this" meant. Once he remarked quite suddenly during the Ror-

schach administration: "My mother says I am crazy. She just thinks I am crazy!" At another point, he said: "I want to be a doctor, but I hate to see the sight of blood."

REVISED STANFORD - BINET SCALE - FORM L

C.A. 10-6 M.A. 9-8 I.Q. 92

YEAR VIII

(+) 1. Vocabulary
(+) 2. Memory for stories: The Wet Fall. a)+ b)+ c)− d)+ e)+ f)+
(+) 3. Verbal absurdities 1. a)+ b)+ c)+ d)+
(+) 4. Similarities and differences. a) Baseball-orange (+) b) Aeroplane-kite (+) c) Ocean-river (+) d) Penny-quarter (+)
(+) 5. Comprehension IV. a)+ b)+ c)
(+) 6. Memory for sentences III. a)+ b)
Mos. Basal

YEAR IX

(+) 1. Paper cutting I
(+) 2. Verbal absurdities III. a)+ b)+ c)− d)+ e)−
(+) 3. Memory for designs
(−) 4. Rhymes. a)− b)+ c)− d)−
(+) 5. Making change. a)+ b)+ c)+ (Done extremely fast).
(+) 6. Repeating 4 digits reversed a)− b)+ c)−
Mos. 10

YEAR X

(+) 1. Vocabulary
(−) 2. Picture absurdities II—Frontier Days. "Two against one. Indian's got tomahawk; man has gun."
(−) 3. Reading and report. Memories *12* Time for reading *90"* Mistakes *3*
(−) 4. Finding reasons I. "One: in case of fire . . . bells ring . . . you can't hear; there's too much noise . . . Second: noise on the steps . . you get so excited . . . School may get on fire and then you are cooked." Car is faster and has motor. Bike is slower and in the dark night you have no light . . . you crash right in. When you crash with car you at least can drive home."
(+) 5. Word naming.
(+) 6. Repeating 6 digits. a)+ b)− c)+
Mos. 6

YEAR XI

(+) 1. Memory for designs
(−) 2. Verbal absurdities. (Restless).
(+) 3. Abstract words. a)Connection + b)Compare + c)Conquer − d)Obedience +
(−) 4. Memory for sentences
(−) 5. Problem situation
(−) 6. Similarities
Mos. 4

YEAR XII. (No correct answers).
Mos. 0

	Years	Mos.
VIII	8	
IX		10
X		6
XI		4
XII		0
Total	9	8

Stanford-Binet Interpretation:

This boy does not appear to be up to his age level in reading;

however, he is not severely retarded. His reasoning capacity seems to be interfered with by emotions that impinge on his reality sense. There exist specific fears: of fire and of being hurt in other ways. The fact that in "Picture Absurdities" he is so absorbed by the fight and the weapons employed that the absurdity escapes him would indicate some preoccupation with aggressive thoughts.

Considering his cultural background, his vocabulary score is relatively good. One may assume that Richard is not functioning according to his actual capacity and that were it not for his poor cultural milieu and his emotional problems his I. Q. would be higher.

Despert Fables (Revised Form) Record

(Directions: "This is a game to see how well you can make up the end to stories. Tell me the first answer you think of.")

Story 1. A daddy bird and a mommy bird and their little birdie are asleep in a nest on the branch of a tree. All of a sudden a big wind blows; it shakes the tree and the nest falls to the ground. The three birds awaken all of a sudden. The daddy flies quickly to one pine tree, the mommy to another pine tree. The little bird knows how to fly. What is the little bird going to do?

Answer: Fly to another tree. Later they join up together. Father joins up with mother. Mother joins up with baby.

Story 2. Daddy and mommy are celebrating the day when they were married. They love each other and they have arranged a beautiful party. During the party, the boy gets up and goes all by himself to the end of the garden. Why do you suppose he did this?

Answer: Because he is sick. He had too much ice cream and cake.

Story 3. In a field there is a mommy sheep and her little lamb. The little lamb bounces around all day near his mommy. Every night his mommy gives him some of her good, warm milk, which he likes very much. But he can already eat grass. One day his mommy says to him: "You don't need milk any more; you go and eat some nice fresh grass." What do you think the little lamb is going to do?

Answer: Go and eat the grass.

Story 4. A little bear has a very, very nice dream. He dreams he can become anything he wants to. He can become big and strong like his papa, or just a little bit stronger like his older brother, or nice and kind like his mommy, or little and weak like his baby brother. What do you suppose he is going to become?

Answer: Big and strong like the father.

Story 5. A dog goes crazy and bites his daddy and his mommy and all of his brothers and sisters. Who gets hurt most?

Answer: Daddy, because he don't like daddy.

Story 6. On the farm there is a little baby calf and his mommy, the cow. The calf plays all day long with his mommy. Whenever he asks for it his mommy gives him some of her good warm milk. But he is old enough to eat grass. One day the farmer brings the mommy a teeny weeny little calf who is very hungry. But mommy does not have enough milk for two, so she says to the bigger calf: "I haven't enough milk for two; you, you are bigger, you go and eat some nice fresh grass." What do you think the little calf is going to do?

Answer: Going to eat some nice fresh grass, that is the only thing to do.

Story 7. One day a little boy was walking in the woods. A fairy came up to him and said: "Make a wish, you can have anything you like." What wish do you suppose he makes?

Answer: He wishes that he could get back home.

Story 8. Somebody in the family took a train and went way, way far away and will never come back. Who is it?

Answer: Father.

Story 9. A boy says softly to himself: "Oh, I'm afraid!" What do you suppose he is afraid of?

Answer: That his father went out, and somebody may come and rob him.

Story 10. A boy has a little elephant which he likes very much, and which is very pretty with his long trunk. One day when he comes back from school, he comes into his room and finds that the elephant has changed. How do you suppose it has changed?

Answer: Maybe he grew. Or they exchanged elephants, put another one down instead.

Story 11. One afternoon a boy comes home from school. The neighbor lady tells him that his mommy has gone away for a while with daddy; she does not know when mommy will come back. What do you suppose he does?

Answer: He starts crying and wants his mother and father home.

Story 12. A family of deer is running in the woods. Suddenly a hunter comes along and shoots and kills one of them, but the others don't get hurt. Who do you suppose gets killed?

Answer: The baby because he couldn't run so fast.

Story 13. A boy wakes up one morning very happy, and says: "Oh, what a wonderful dream I had!" What do you suppose he has dreamed?

Answer: That it was Christmas and he had lots of toys downstairs.

Story 14. A boy has made something with clay, a tower, which he thinks is very, very pretty. What is he going to do with it?

Answer: Make a man on the tower. Make a piece of rope and put another man up.

Story 15. A boy and his mommy went for a nice walk in the park all by themselves. They had a lot of fun together. When he comes home the boy finds that the daddy is angry. Why is he angry?

Answer: Because the boy did something wrong in the park.

Story 16. Teacher calls a boy in front of the room one day. She tells him that he must go home right away because something terrible has happened. What do you suppose has happened?

Answer: Father got sick, perhaps mother.

Story 17. A boy has made a very pretty drawing with crayons. His mommy asks him to give it to her. Do you think he is going to give it to her?

Answer: No, because he wants to keep it.

Story 18. One morning a boy wakes up very tired, and he says: "Oh, what a bad dream I had!" What do you suppose he has dreamed?

Answer: He dreamt that somebody was trying to kill him in his dream, and when he woke up, somebody *was* there.

Story 19. A boy comes back from school and his mommy tells him: "Don't begin your homework right away. I have some news to tell you." What do you suppose the mommy is going to tell him?

Answer: That somebody died in the family.

Story 20. In a country, far, far away, a daddy and a mommy and their two children are living. There is so little food that they are all hungry. Daddy and mommy think that they will have to send one child away, but they love the

older child and they love the younger child and they talk and talk about what to do. What do you suppose they will do?

Answer: Send the younger away. The older will live with them because the older one is stronger than the younger one. So they send the younger one away. The younger one will die because of no food.

Despert Fables Interpretation:

This is a boy with a strong longing for a home that would provide the security and warmth which he seems not to be receiving. He is a generally fearful boy who seems to be afraid of parental desertion. A strong attachment to the father-figure co-exists with an attitude of hostility toward him. Fear of desertion by the father seems especially marked. Rather strong hostility toward a sibling is also shown.

Rorschach Test

Performance	*Inquiry*
Card I	
8″	
1. Looks like part of somebody's body, and this is around the belly. W F— At	1. The part where the food goes down.
Card II	
2″	
1. Two clowns. They are dancing. Like Hallowe'en masks. Both of them have costumes of cats. W M,CF,Fc,m H	1. This one got a mask like a cat, and this one like a dog. Legs are bleeding. Costumes of big bears. (?) Fur. Big grizzly bears.
Card III	
1″	
1. Two boys picking up a bucket of water . . . here is some blood because they got hurt. They are bending over to the pail of water because maybe it is heavy. They both wear short pants, they both got coats. W M,CF,FC', H P O	1. They got cut (all red areas are blood). They live on the farm. They have to go out to the well to get the water, and out there it is cold. (?) Black jackets. They have lady's shoes.
Card IV	
2″	
1. Looks like a big gorilla. He is black. He has big feet. He just broke away from the zoo. W FM,FC',m A	1. He is going to a lady's house. He is going to kill the lady because the lady was teasing him. (? center D) He got hurt. Men were shooting at him, so skin is hanging there . (?) He is black; see the color.
Card V	
2″	
1. This looks just like a bat. These things over here sucks the blood, tail,	

two wings. Coming into somebody's house to suck the blood out of him so he gets weak.
W FM A P O

CARD VI

5″

1. Looks like a big insect. It stares right at you, makes you blind when you are looking at it. Has six legs and can fly.
W F— A

1. It has something in his eyes that it shoots at you and makes you blind. You can't seem to kill her unless you are in back of it. Right here it is dead.

CARD VII

2″

1. This is a little rabbit standing on a piece of cotton. The two rabbits are looking at each other.
W FM,K,FC',C'F A

1. Standing on a cloud (?) A nice white cloud, and it is a nice white rabbit.

CARD VIII

2″

1. This is somebody's ribs, up here (indicates by placing hand on chest.)
D F At

2. The side under here (points to the body part under the arms).
D CF— At

2. (?) Part of the body under your arm. (?) The flesh . . . the form, you feel it under each arm (he touches his body under the arm). Flesh is red. (usual animals)

CARD IX

6″

1. This is sand (orange area) in the jungle, desert . . .
D CF N

2. Here are some trees . . .
D CF Pl

3. Here is the clay (red area) . . .
D CF N

4. Up here is the savages' tents . . . (all the white spaces).
S F Obj

5. And this is the line where they come to war . . . they come down this line to war. It is about a hundred miles, and it takes days and days.
D F N

6. This white part here is not much trees,—just low grass and water.
S K N
ADD: WS FK

3. Red clay—all that is in the jungle. (?) It's all one landscape. Savages live here only. (VI);

6. A little bit of cocoanut trees. You can hardly see them (?) I see it from high above. When you come down, you are right in the sand. . . . The trees look just like big green beds (refers to 2).

CARD X

3″

1. Some insects biting a man. He was dead. Insects (outer blue) biting to

1. Part of a man (top grey & pink). Around him are insects (etc.). Body is

get some meat. They are sticking the claws into his body.

W FM, CF– A,At

2. These (outer brown) two are big rats. They are eating the meat out of his body.

D FM A

3. Two big flying roaches (top green) eating up his body.

D FM A

4. Here is the gun (left bottom outer orange) and here is the knife (right orange) because he didn't want the cops to know that he killed him—a murderer killed him—and made it look like suicide.

D F– Obj.

naked. Man who killed him just finished the man up. (Why is this a man?) The blood reminds me of a man.

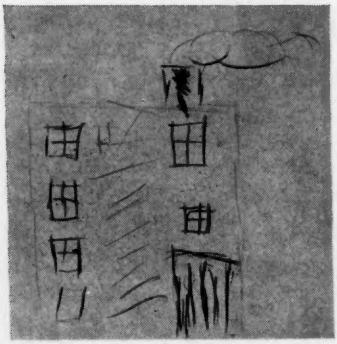
Testing the Limits

VIII (For P): Looks like a lion. (?) Standing . . . walking. Lions also look like two things to hold the books.

X (For P, FC: lower center green): Yes, part of your body . . . near the belly. (He touches his abdomen.)

(Snakes?) No. (Caterpillars?) Could be . . . a green one.

House - Tree - Person Test



House Drawing.

Associations:

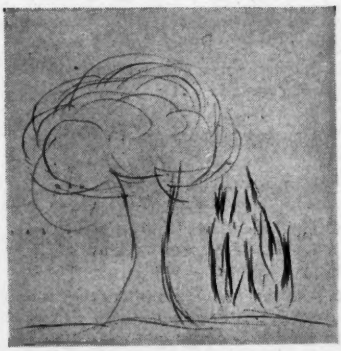
"...a house in the city.

"...it has four floors.

"...just a house . . . like a house that burnt down . . . black is where it's burnt.

"...they don't have rooms in there . . . door is barred up.

"...I was in the house next door



Tree Drawing.

Associations:

"...an oak tree . . . about 100 years old.

"...I saw one . . . where I went to camp . . . in the woods.

"...it is a fat tree . . used to look like this (a) . . . now it looks like this (b) . . . it it burnt down.

House Drawing (Continued)

. . . some pigeons got burnt too."

Tree Drawing (Continued)

"...a man tree . . .

"...they told us there was Indians . . . and that is what the Indians did."

First Female Figure.

Associations:

"...a woman . . . about sixty-five.

"...she is a mean and ugly girl.

"...lives around my block . . . she is bad.

"...she don't like the kids . . . they don't like her.

"...they always beat her up.

"...she is always cursing and dumb."

First Male Figure.

Associations:

"...let us make a baseball player.

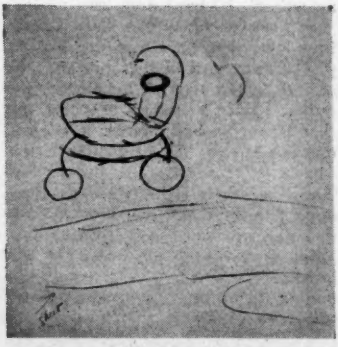
"...Joe DiMaggio . . . or Jackie Robinson.

"...plays second base . . . he's holding the bat.

"...he's twenty-three years old."

Second Female Figure.

Richard had been asked to draw a



Second Male Figure.

In order to see what other figure he

Second Female Figure (Continued)
full female figure.

Associations:

"...she is going to the market to shop.

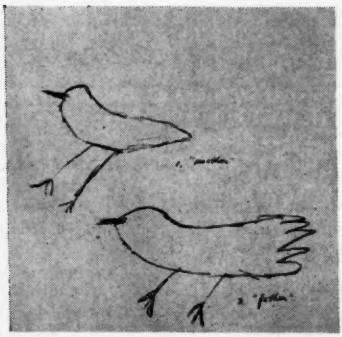
"...about forty-five.

"...nice lady . . . she helps the poor."

Second Male Figure (Continued)
would draw besides a hero-ideal, he was asked to draw another "he-person".

Associations:

"...I make a new baby in the carriage."



Animal Figure. When asked to draw an animal, Richard drew two pigeons (See associations to the house drawing): the first "a silver don, a she pigeon, strong, a mother pigeon," the second "a red tiger, a he pigeon, the father, strong." Except to point out that Rapoport and Bender (7) found that birds were drawn by youngsters who came from broken homes and "were impulsively getting away from some unpleasant environment by truancy and vagrancy," we shall limit ourselves to pointing out a few of the interesting features that immediately present themselves in light of the foregoing discussion:

1. The beak as instrument of orality and aggression, to be seen in light of our discussion on the manifestation of orality on Rorschach and H-T-P. Note the shading and line quality and compare with other "mouth renditions."

2. The tail feathers given the "father", but no delineation of same in "mother-figure", to be related to the "desertion" theme.

3. The lack of eyes to be related to the "eye" motif in Rorschach and H-T-P.

4. The portrayal of "mother" and "father", both strong, to be seen in light of our discussion of this boy's basic longing for a secure, loving home, and the actual role a father would play in such a home.

5. The sequence and placement should be noted.

Rorschach and House-Tree-Person Interpretations:[2]

	Rorschach	House - Tree - Person[3]	
	Intelligence & Achievement		
Form Level.	Richard possesses above-average intelligence, but because of severe emotional disturbances, he does not function according to his capacity. His intel-	This is an intelligent, gifted boy . . .	Differentiated rhythm;[4]
ideational content;	lectual control and his grip on reality are im-		
P:O = 2: + 3;	paired by autistic ideations. These control his perception of a situation in such an	. . . overvalent ideation impinges on his sense of reality.	"burnt" Tree and House.
"minus"— R's.	over-valent manner that popular, conformist thinking — seeing things as other people do—is hampered. He frequently loses control of his judgment; then his thinking in everyday, common life situations may become autistic and irrealistic.		
W:M:FM: CF= 8:2:6:4+3.	He is ambitious, but, as yet, he is too immature, too taken up with personal fears, too preoccupied with giving vent to infantile urges to harness this ambition for purposes of "social" (home, school) achievement.		
	Drives & Emotional Aspects		
Oral content (esp. V);	Emotionally, underlying dependency wishes (affection and succorance)	Regressive wishes are indicated . . . , but there is a self-denial of affectional bids, a suppression of his	Baby drawing; windows—paneless vs. paned;

[2] For the sake of comparison, the Rorschach test and H-T-P test interpretations have been placed parallel to each other in columnar arrangement and the "signs" upon which the respective interpretations have been based are indicated.

[3] As a basis for his interpretation of drawings, the writer has drawn principally upon the findings of Buck (1), Machover (6), and Waehner (8,9).

[4] See Waehner's criterion of "Secondary Movement" (9).

	RORSCHACH	HOUSE-TREE-PERSON	
Ideation & content (III); animal Symbolism (II, VII); aggressive content (f.i. blood) & ideation.	Co-exist with an overt picture of aggressiveness.	longing for warmth and succorance, and a surface reaction of opposition and aggression.	lips—shaded (m.f. & "nice" f.f.) vs. unshaded ("mean" f.f.); line—heavy pressure, violent & sketchy.
Orality (esp. V); hostility towards mother (IV).	Severe frustration of early oral cravings is indicated.	Strong impulse frustrations dating from an early age . . . there is anxiety connected with his oral needs denoting frustration of dependency wants.	Arms—missing (both f.f.'s), fragmentary (m.f.); placement—humans to left; lips—shaded.
K=1+1; use of middle line (I, IX); At; animals on unsubstantial base (VII); flexor M (III); "cut" motif (II, IV); ideation (V, VI); ideation & content (III, IV); C': CF = +4:4+3.	He is anxious and has feelings of insecurity, inadequacy, and vulnerability. There is evidence of traumatic experiences in human relationships causing the "burnt child" reaction. Inner depressive feelings emerge in restless, irritable, and apprehensive behavior.	Attempts to obtain affection seem to have been rebuffed. Anxiety and insecurity dating from early infancy . . . depression and fears . . . feelings of inadequacy and vulnerability. . . Restless, irritable, and apprehensive behavior may be expected.	Arms—fragmentary (m.f.), missing (f.f.); paper-basing (House); ground-line—(baby drawing) carriage above; "burnt-black" motif; line—broken, violent, sketchy: "action"—woman walking, "Dimaggio" at bat.

Rorschach		House-Tree-Person	
R's to VIII, IX, X=63%; FC:CF= 0:4+3; "hurt" vs. "body" vs. "blood" themes. F:FM:FC: CF= 6:6:0:4+3; ideation & content (IV, IX, X).	Outside influences stimulate him strongly, but he cannot cope with his affect adequately. The thwarting of early needs never made it worthwhile for him to establish an inner restraint in the sense of super-ego control. Conduct is governed to a great extent by strong, for the most part unsublimated, primitive drives.	He is strongly stimulated by outside forces and tends toward self-centered, hysteric-like reactions. His home is not experienced as a substantial shelter . . . feeling of rejection by mother . . . strong feeling of body power . . . primitive urges not well controlled. May put on front of cockiness.	Eyes—size; heavy, reinforced line; line of house—light pressure of outline vs. heavier pressure of detail; arms—missing (f.f.); Tree—trunk—girth, "oak . . . 100 years . . . fat and strong . . ."; chest—expansive; neck—missing (all humans); line—heavy, violent, sketchy.
Ideational Life & Interpersonal Relationships			
Ideation & content (IV, V, VI); ideation & content (IV, VI, IX, X).	This boy's rich imagination is taken up, on the one hand, with fearful fantasies of being hurt or being retaliated against in other ways, and on the other hand, with aggressive, revengeful ideations of killing and mutilating.	This boy seems to have fears of being harmed; there is a specific fear of fire. Turbulent fantasies are also indicated, and when he is provoked, may receive expression in aggressive outbursts.	Associations to House & Tree; foliage emphasis (Tree); line (entire Tree)= indication of branch structure completely

RORSCHACH		HOUSE-TREE-PERSON	
			lacking: impulsively sketchy & heavy quality; .
F:FM:FC: CF= 6:6:0:4+3;	Abrupt shifting from hostile fantasy to hostile behavior may be expected, and this aggression seems centered about the mother. She is in conflict with him and he seeks to rebel against her authority.	Hostile feelings and overt hostility are seen in connection with the mother figure. She is perceived as domineering. He resists her authority.	hair—"messy" rendering ("mean" f.f.) vs. "more contained" rendering ("nice" f.f.).
ideation & content (IV, VI);			
note "his" to "her" change (VI);			size—f.f. larger than m.f.
"eye" ideation (VI);	He is suspicious of, and feels watched by her.	He experiences his mother as too watchful of him. He is suspicious of her.	
			ear—presence ("mean" f.f.) vs. omission ("nice" f.f.), largeness (m.f., f.f.).
			eye—large, & heavy, reinforced line quality (m.f., "mean" f.f.). Open ("mean" f.f.) vs. closed ("nice" f.f.).
". . clowns, masks, costumes . . " (II);	People, and social situations in general are to be feared and Richard reacts to them in his anxious-aggressive, infantile - emotional, and non - conformist way.	He possesses rather strong feelings of social inadequacy, and is uneasy with people and in situations. His reaction to them may vary from sullen, smouldering irritability to hysteric-like aggressive outbursts.	view—profile of face vs. ¾ body view (m.f.);
"hurt . .			
blood-bleeding . . "reaction (II, III);			foliage: eye: line quality = billowy: empty:

Rorschach			House-Tree-Person
K in color (IX);			heavy & impulsively sketchy.
Initial At reaction—I (initial test encounter), VIII (initial all-color encounter).			
Identifications			
Males in women's shoes (III);	He appears to identify his mother with the masculine - authority role; in fact, there is reason to suspect that the male adult as authority figure has been experienced as weak and ineffectual by this boy.	Sexual confusion is indicated. The mother-figure is experienced as domineering and seems to be designated the masculine role. The lack of an adequate male figure with whom to identify is indicated.	Sequence (f.f. drawn ahead of m.f.);
"his . . her" (VI);			bust representation offered initially;
human figures = boys (III).			size—f.f. larger than m.f.;
			nose—"peculiar" rendering ("mean" f.f.) vs. "modified" rendering ("nice" f.f.);
			progression—baseball player to baby-in-carriage.
Body Symptoms			
At (esp. the all—At reaction to VIII).	Besides overt misbehavior, some somatic complaints may be resorted to especially when a situation is too anxiety-arousing.		

	Rorschach	House-Tree-Person	
Goldfarb's "Rorschach tendencies"—C greater than M, high C total. CF greater than FC, few P (& modified in-direction of O).	There is indication of enuresis which, in combination with pregenitally (orally)—determined aggressive ideations, would suggest, at least partly, an aggressive and vengeful basis of this symptom.	Enuresis — which may be a combined expression of a specific fear of fire (rooted in an actual occurrence) and vindictive impulses — is indicated.	Deviation in symmetrical proportions (see legs—m.f.).; "fire" motif; "break" at crotch (m.f.).

Discussion

This case demonstrates how all the sources of information corroborate and supplement each other. Among the projective techniques themselves, we see how one test checks another on a particular aspect of the personality, and how a third, because of its different approach, rounds out a feature by throwing light upon it from a different angle.

For example, all the projective tests elicit this boy's basic longing for a secure, loving home. It is the Rorschach and the H-T-P test which give us a picture of frustration of basic oral dependency cravings, their suppression by this boy, a reaction-formation of hostility and defiance centered particularly about the mother, and a rather general statement as to the ineffectuality of the father. The Fables, on the other hand, reveal the actual role a father would serve for this youngster in a "secure" home, and the actual need and wish this boy has to depend upon and identify with a "father" (Fables 1, 4, 9, 11, 16). Such concrete material the Rorschach and H-T-P do not give. The Fables also show the ambivalence toward the father-figure (Fable 5), and indicate desertion as the possible reason (Fables 8, 9).

Another illustration of the "dovetailing" and complementary workings of these three projective techniques is found in the aspect of feelings of rejection experienced by Richard. This sense of being rejected may be surmised indirectly through the Fables by the strong sibling rivalry expressed (Fables 12, 20), the resignation to having to "give way" (Fable 6—especially the verbalization: " . . . that is the only thing to do"; Fable 3), and the fear of desertion (Fable 11). The Rorschach gives us a general statement about "traumatic experiences in human relationships causing the 'burnt child' reaction" and non-satisfaction of early needs from which rejection can very definitely be inferred. The H-T-P, however, presents the clinching factor: the lack of arms on the female figure is perhaps the most salient, single sign of the experiencing of complete rejection for the pre-adolescent boy.

The manifestation of orality on the Rorschach and H-T-P fur-

ther exemplify the complementary function of a test battery. On the former, orality takes the form of aggressive defense (Cards V and X). The H-T-P emphasizes his basic oral cravings and attendant anxiety, besides eliciting his aggressive defense. The constellation on the H-T-P brings out this "struggle" quite clearly in the window-rendering (paneless vs. paned in connection with heavy and impulsively sketchy line quality of the windows as opposed to the lighter line pressure used for the house outline) and in the lip-rendering (size in connection with shading of the male figure's and the "nice" female figure's lips vs. lack of shading of the "mean" female figure's lips. Here the lack of shading of the "mean" female figure's lips in relation to the lip shading of the other figures is interpreted as a refusal to acknowledge the anxiety experienced over oral deprivation "in face of" his actual mother).

Important points of interpretation are based on themes of content material which recur unusually often. The interpreter hesitates to base a particular point of interpretation on one particular response no matter how rich in ideation this one response may be (e.g., the response to Card VI of the Rorschach). One of the great values of a test battery such as used with this case is that "themes" holding individual meaning often "break through" on more than one test but occur only once in any single test record. By the use of "inter-test material" (as contrasted to "intra-test material") the examiner can feel more certain of the interpretive significance of a particular "test element", and more accurately appraise and emphasize its significance within the total personality configuration.

We have several excellent illustrations of this point in this case. One is the murder theme which comes out on the Fables (Fable 18) and on the Rorschach (Card X.) The overvalence of this fear is conspicuously demonstrated on the Rorschach where the mere stimulus produced by the red area of the blot leads him to construct a comparatively intricate murder story: the means are not "adequate" to the end. Incidentally, this illustration demonstrates at the same time the complementary workings of the two tests: the Rorschach shows only that "someone" has shown aggression and "aggressive inclinations" are therefore attributed to Richard; the Fables, by "forcing" a more personal identification, show that it is actually he (Richard) who may be the one killed. Only through the use of both tests are we enabled to obtain the clear view we do of the polarity of fear and aggression in action.

The fire theme is a second example which presented itself on the H-T-P and the Stanford-Binet (Year X, Item 4). The importance of this "knowledge" in the evaluation of Richard's intelligence can readily be seen. What actual effect his preoccupation with fire had on his performance of the reading selection (Year X, Item 3)—the theme of which is "fire"—is an interesting question which could not be followed up due to time limitations.

But another failure on the Stanford-Binet which seems to have stemmed from emotional factors primarily is that of "Picture Absurdities" (Year X, Item 2). It appears that Richard was so taken with the fight and weapons (he mentions the gun and tomahawk specifically) that the absurdity was lost upon him. This interpretation seems very warranted when we turn to the Rorschach protocol and take note of its generally aggressive ideation and content, and specifically of the response "gun . . . knife" (Card X).

Still another example of a striking, single item of ideation appears in the response to card VI of the Rorschach: ". . . it stares right at you, makes you blind when you are looking at it . . . has something in his eyes that it shoots at you and makes you blind . . ." Despite the conservative interpretation of this ideation, the writer was hesitant until he glanced at the drawings. The relatively large size of the eye ("mean" f.f.), the heavy pressuring of its line, the "closing" of the "nice" female figure's eye substantiated the point of interpretation in doubt.

In the case of this boy, some qualities found in the Rorschach records of adult persons with paranoid tendencies (paranoid signs, over-specificity, self-reference, bizarre responses) are found in his Rorschach record. The indications on the H-T-P are much more tenuous. The large and heavy pressured rendering of the eye (despite the lack of iris, an hysteric feature) and ear, the expansive quality of the fully-drawn figures (see chest region of m.f. and "nice" f.f.), the heavy pressure of line in general may be related to the suspiciousness and grandiosity of the paranoid individual, but the overall configurational setting is certainly not paranoic.

The difficulty of determining from a child's projective material whether these features indicate an incipient schizophrenic process or whether they represent a "normal" reaction—a reaction possessing a "reality basis", e.g. life experience in an underprivileged section of Harlem—is readily understandable.

In connection with this case, the interesting question of indications of enuresis on the Rorschach and H-T-P also arises.

Goldfarb (4), studying the personality trends in eight enuretic children below the age of ten, noted specific "Rorschach tendencies" in six of his cases. The "Rorschach tendencies" did not seem to apply to the remaining two. Goldfarb then points out that enuresis is a symptom, and as such is found "in conjunction with varying behavior patterns." Thus, Goldfarb's "Rorschach tendencies" were gleaned from records of six enuretic youngsters manifesting a Rorschach picture of "instability of the overt, aggressive, and affectively uncontrolled variety." Richard would certainly seem to belong with this group of six.

Enuretic children exist, however, who do not present such a Rorschach picture, and consequently, the most prominent of Goldfarb's "Rorschach tendencies" will not appear in their records. The

personality constellations—other than the one manifested by Goldfarb's six children—in which enuresis is a typical feature have not as yet been clearly delineated. Further research along the lines of Goldfarb's study seems indicated as one possibility of better establishing these delineations.

Whereas the writer's Rorschach records of enuretic children do not all demonstrate the Rorschach pattern of Goldfarb's group, the H-T-P records of our enuretic cases all have one feature in common, that is, some manifestation of symmetrical disproportion in the human figures drawn. The symmetrical disproportion may be one of size and/or dimension and/or location, and most usually occurs in the arm, hand, shoulder, leg, and foot areas. In one of our cases, one eye of the male figure—a nearly exact duplication of the other—was placed notably below its mate. In some cases, large areas of the body were "distorted"; in other cases, the discrepancy was not outstanding at all.

It is not meant to imply that symmetrical disproportion is a sign of enuresis on the H-T-P. It may be an indication of a more general condition of which enuresis may be but one manifestation. We have seen the human figure drawings of one youngster who was not enuretic in which symmetrical disproportion was found. The boy, however, did have pyschogenic somatic complaints (asthma, hand tremor, aches and pains in the joints).

Nor is it to be implied that there is only one single indication of enuresis on the H-T-P. Other "signs," formal or ideational, may exist. Also, when an inference of enuresis is considered, the configurational picture already obtained from the test should be taken into account. To illustrate from Richard's H-T-P record: we have the theme of fire as an ideational "sign." The "break at crotch" was used as a supporting indication of enuresis because the implied conflict about this region agreed with the enuretic cues of "fire" and symmetrical disproportion and with the general picture of uncontrolled aggressiveness and regressive longings (which made consideration of enuresis plausible). Thus it can be seen that the so-called "signs" were viewed in relation to one another and evaluated against a configurational background before a statement of enuresis was considered warranted. Of course, the indications of enuresis on the two tests made a statement of the finding of enuresis doubly certain.

Summary and Conclusions

There can be little doubt that the four tests used together as a battery proved most useful in giving a more adequate personality picture. Some of the useful contributions of such a battery, as illustrated by this case are noted below.

1. Within a test battery, an intelligence test like the Stanford-Binet can add more than an I.Q. to the personality description obtained from the projective tests. Responses on an intelligence test

could be evaluated as expressive material which contributed to more concrete focussing of the general findings of the projective tests.

2. "Themes" holding special individual significance broke through on more than one of the tests but only occurred once in a respective test record. A new facet for interpretation—that of "inter-test material"—thus emerges, and interpretation of these "themes" may be made with more assurance.

3. A test like the Despert Fables, devised to elicit material at the more conscious level, supplied more specific information to the more general personality picture gained from the "major" projective tests.

4. Discrepancies are to be found: why is it that Richard's Rorschach record contains strong paranoid indications while his H-T-P record did not? This fact touches upon an area of research that is still needed in the field of projective methods. As Camilla Kemple (5) has put it: "There is . . . a wide open field for research . . . with projective methods to determine basic principles underlying the similarities and differences in what they reveal. . . We know more about the eating of these puddings than about their making."

5. Confidence in the finding of a specific symptom such as enuresis is increased when indications pointing to this symptom exist in more than one of the test protocols. We may even find a specific "sign" that is a combination of factors on more than one test.

6. The value of a test battery is clearly indicated. For through the corroboration and supplementation involved, the interpreter can obtain a wider configurational personality picture of which he may be more certain and whose features are thrown into better focus.

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BRIEF REPORTS

An Introductory Note on the Children's Apperception Test (CAT)

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The field of projective techniques has been a lively and a steadily growing one, with an emergence of a great variety and number of new techniques. While one can at times not help feeling that there is some unnecessary duplication, there is some justification for new approaches if they promise greater economy and greater or more specific information in special areas of psychological endeavor.

To this latter category belong, for instance, Symond's Picture Story Test (6), and Thompson's modification of the Thematic Apperception Test (7). Both supplement the original TAT, one deriving additional information on problems more specifically those of adolescents, the other facilitating identification for Negroes.

It is with this thought in mind that a new apperceptive test for young children was designed. Despite the generally outstanding usefulness of the TAT it was felt that situations could be depicted which would lend themselves more specifically for the ascription of typical childhood problems.

The Children's Apperception Test (CAT) is a test for children from the ages of three to ten, of both sexes and all ethnic groups. It consists of ten pictures mounted on cardboard of convenient size. The pictures show a variety of animals in situations likely to lead to stories which permit the projection of children's problems around eating; relation to parental figures as individuals and as couples, with the primal scene as the focal point; revelation of fears of loneliness; problems of sibling rivalry, toilet training, mastery, aggression, masturbation, etc. (Figure 1).

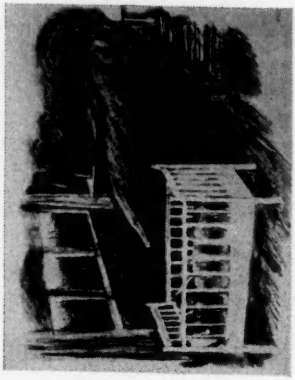
Animal pictures were chosen because psychoanalytic experience has shown that children will frequently identify more readily with animals than with human figures in the process of personality development.[1] At the same time, it is possible to use the pictures with all ethnic groups and probably in any culture except those to whom some of the inanimate objects depicted might be unfamiliar. We have found that lack of familiarity with a certain animal does not constitute a problem since children simply refer to the unfamiliar animal with a name of one which they do know.

Below are presented typical themes given as responses to the various pictures in a sample population of 100 children of all ages between three and ten, and of various ethnic and socio-economic

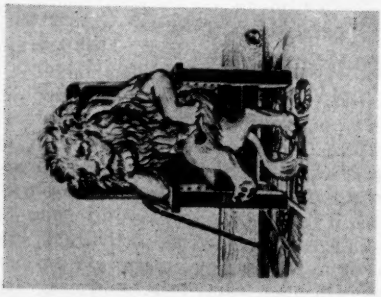
[1] The author is indebted to Dr. Ernst Kris who expressed the idea of using animals originally in a discussion of problems of projection with the author. Dr. Kris was good enough to give permission to make use of the idea.

FIGURE I

4



5



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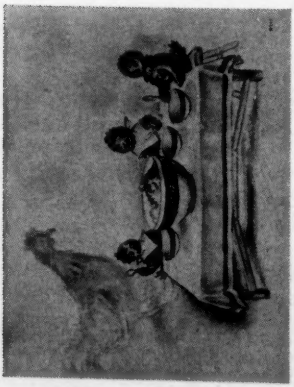


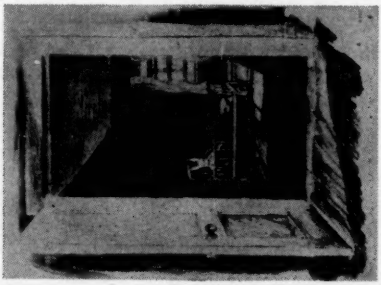
1

2

FIGURE I (*continued*)

8

10



9

6

7

backgrounds.

Picture No. 1: Chicks seated around a table on which is a large bowl of food. In the background is a large chicken dimly outlined.

Responses revolve around eating, being or not being sufficiently fed, by either parent. Themes of sibling rivalry enter in around who gets more, who is well behaved and not, etc. Food may be seen as reward, or inversely, its withholding seen as punishment; general problems of orality; satisfaction or frustration; feeding problems *per se* will often be illuminated.

Picture No. 2: One bear pulling a rope on one side while another bear and a baby bear pull on the other side.

It is interesting to observe whether the subject identifies the figure with whom the baby cooperates as father or mother, or neither. The picture may be seen as a serious fight with accompanying fear of aggression, fulfillment of the child's own aggression or autonomy. More benignly this picture may be seen as a game (tug-of-war). Sometimes the rope itself may be a source of concern, i.e., breakage of the rope as a toy and fear of subsequent punishment; or again, purely as a symbol around masturbation, castration, etc.

Picture No. 3: A lion with pipe and cane, sitting in a chair; in the lower right hand corner a little mouse appears in a hole.

This is usually seen as a father figure equipped with such symbols as pipe and cane. The latter may be seen either as an instrument of aggression, or may be used to turn this paternal figure into an old, helpless one of whom one need not be afraid. This is usually a defensive process. If the lion is seen as a strong paternal figure, it will be important to note whether it is a benign or a dangerous power. The mouse is seen by the wide majority of children and often is taken as the identification figure. In such a case – by tricks and circumstance – the mouse may be turned into the more powerful one. On the other hand, it may be totally in the power of the lion. Some children identify with the lion and there will be subjects who will switch identification one or more times, thus giving evidence of confusion as to its role, conflict between compliance and autonomy, etc.

Picture No. 4: A kangaroo with a bonnet on its head, carrying a basket with a milk bottle; in her pouch a baby kangaroo with a balloon; on a bicycle, a larger kangaroo child.

This usually elicits themes of sibling rivalry, some concern with the origin of babies. In both cases, the relation to the mother is often an important feature. Sometimes a child who is an older sibling will identify with the pouch baby, thus indicating a wish to regress in order to be nearer the mother. On the other hand, a child which is in the reality situation the younger one, may identify with the older one thus signifying its wish for independence and mastery.

The basket may give rise to themes of feeding. A theme of flight from danger may also occasionally be introduced. Thus far, in our investigations, this can be equated with unconscious fear in the area of father-mother relationship, sex, pregnancy, etc.

Picture No. 5: A darkened room with a large bed in the background; a crib in the foreground in which are two baby bears.

Productions concerning primal scene in all variations are common here: the child is concerned with what goes on between the parents in bed. These stories reflect a good deal of conjecture, observation, confusion, and emotional involvement on the part of the children. The two children in the crib lend themselves to themes of mutual exploration and manipulation between children.

Picture No. 6: A darkened cave with two dimly outlined bear figures in the background; a baby bear lying in the foreground.

This is again a picture eliciting stories primarily concerning the primal scene. It is used in addition – and immediately following – No. 5 because practical experience has shown that No. 6 will enlarge frequently and greatly on whatever was held back in response to the previous picture. Plain jealousy in this triangle situation will at times be reflected. Problems of masturbation at bed-time may appear in response to either No. 5 or No. 6.

Picture No. 7: A tiger with bared fangs and claws, leaping at a monkey which is also leaping through the air.

Fears of aggression and manners of dealing with them are here exposed. The degree of anxiety in the child often becomes apparent. It may be so great as to lead to rejection of the picture or, the defenses may be good enough (or unrealistic enough) to turn it into an innocuous story. The monkey may even outsmart the tiger. The tails of the animals lend themselves easily to the projection of fears of or wishes for castration.

Picture No. 8: Two adult monkeys sitting on a sofa drinking from tea cups. One adult monkey in foreground sitting on a hassock talking to a baby monkey.

Here one often sees the role in which the child places himself within the family constellation. His choice of the dominant (foreground) monkey as either a father or mother figure, becomes significant when correlated with whether it is seen as a benign monkey or as an admonishing, inhibiting one. The tea cups will, on occasion, give rise to themes of orality again.

Picture No. 9: A darkened room seen through an open door from a lighted room. In the darkened one there is a child's bed in which a rabbit sits up looking through the door.

Themes of fear of darkness, of being left alone, desertion by parents, significant curiosity as to what goes on in the next room are all common responses to this picture.

Picture No. 10: A baby dog lying across the knees of an adult dog; both figures drawn with a minimum of expressive features. The figures are set in the foreground of a bathroom.

This leads to stories of crime and punishment, revealing something about the child's moral conception. There are frequent stories about toilet training as well as masturbation. Regressive trends will be more clearly revealed in this picture than in some others.

Work with the CAT presupposes a knowledge of child psychology and clinical experience with children. The administrative problem is to interest the child in telling a story about the pictures; what the animals are doing.

The interpretation of the test resembles the TAT closely. Again, this author believes that this type of material is most advantageously used for a content analysis based upon the hypothesis of apperception (2) and psychoanalytic understanding. A manual has been written (1) [2] which sets forth the details of the interpretation and administration. Also, a Record and Analysis Blank has been designed to facilitate systematic study and interpretation of the stories (Figure 2).

It is to be hoped that the test will be used not only for strictly clinical purposes. One possible research project might consist of the administration of the test at half yearly intervals, to the same child (3). Thus we might learn about the developmental fate of a number of psychological problems: shift of identification figures, vicissitudes of drives, etc., which are otherwise scrutinized only in psychoanalytical investigations or cross sectional studies. These latter are by necessity reconstructions and inferences which need further confirmation and elaboration in longitudinal studies (5).[3]

Further researches with some modification of the CAT are being conducted on the use of color pictures and the use of cut-outs of some of the animal figures to be moved on the background of the current pictures. Judgment of the usefulness of such variations must be very cautious since both attempts introduce additional variables for consideration, which may produce complexities beyond the optimal point of clinical usefulness and economy.

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[2] The manual and test material for the CAT are available from the C.P.S. Company, P.O. Box 42, Gracie Station, N. Y. 28, N.Y.

[3] Within this context, the Blacky Test (4) should be mentioned. It consists of cartoons of a dog family, shown to adults in an experimental situation, originally designed to test psychoanalytic hypotheses rather than to serve as a projective method per se. Only recently were the Blackie cartoons published as a regular test.

ANALYSIS SHEET

(Fig. 2)

Name..... Age..... Sex..... Story No.....

1. *Main Theme:*

2. *Main Hero (Heroine):* age.....sex.....vocation.....
   interests.....
   traits.....
   abilities.....
   adequacy .....

3. *Attitudes to parental figures:* (√)
   autonomous.....compliant.....respectful.....devoted.....
   grateful.....dependent.....remorseful.....competitive.....
   resistant.....aggressive.....abasive.....fearful.....
   oral.....demanding.....passive.....other.....

4. *Family Roles:* *Hero identifies with:*
   father is seen as.....father.....
   mother is seen as.....mother.....
   sibling is seen as.....sibling.....
   other figure.....is seen as.....

5. *Figures or objects or external circumstances introduced:* (√)
   punisher.....pursuer.....benefactor.....siblings.....severity.....
   friend.....reformer.....teacher.....weapons.....indifference.....
   enemy.....food.....supporter.....injustice.....deprivation.....
   other.....other.....other.....deception.....other.....

6. *Objects or figures omitted:*
   .....
   .....

7. *Nature of anxieties:* (√)
   of physical harm or punishment.....of illness or injury.....
   of disapproval.....of deprivation.....
   of lack or loss of love.....of being devoured.....
   of being deserted.....of being overpowered and helpless.....
   other.....

8. *Significant conflicts:*
   between super-ego and: conflicts between:
   aggression and reacts with.....autonomy-compliance.....
   acquisition and reacts with.....achievement-pleasure.....
   sexual desires and reacts with.....other.....

9. *Punishment for crime:* (√)
   just.....too severe.....lenient.....
   immediate.....delayed.....none.....

10. *Outcome:* (√)
    happy.....realistic.....
    unhappy.....unrealistic.....

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The Effect of Varied Experimental "Sets" Upon Rorschach Test Performance[1]

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Only limited experimental evidence is available concerning the relations between performance on the Rorschach test and the attitudes of the performer, both conscious and unconscious. An understanding of the nature of these relationships is of crucial importance for an adequate evaluation of the clinical meaning of Rorschach results and for the prediction of behavioral change from test data; it is also significant at the level of personality theory. It is conceivable, and on *a priori* grounds it would seem probable, that the nature of these relationships would differ in the "normal" portion of the population from the portion which is customarily designated as suffering from a psychiatric illness.

There are two broad questions, therefore, which have been selected for investigation in this study. The first of these is: To what extent are the scores on each of several of the Rorschach test "variables" modifiable when the subject is given specific, although very brief, instructions to attempt to alter these scores? This question may be subdivided into a series of relevant sub-hypotheses, such as: Is it equally possible to alter one's score on different kinds of Rorschach variables? Is the change in a given variable correlated with any type of alteration in the other variables, separately or in combination? These questions focus on the reliability of the Rorschach scores and score combinations. They also bear on basic problems of prediction of therapeutic change and of course on the more obvious aspects of personality diagnosis.

The second major question may be stated as follows: Is there any relationship between the presumed type of personality structure and either the direction or amount of change in Rorschach performance? Subsidiary questions which follow from this include: Is either direction or amount of change correlated with nosological grouping? Are there any relationships between specific aspects of the personality, such as ego strength, dependency needs and the like, and the kind of shift in Rorschach performance?

This study was planned to test a number of specific hypotheses which these problems suggest. The experiment was carried out upon a group of 92 college students enrolled in the introductory general psychology course, randomly selected from the total population in this course. Each student was given the Rorschach test

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[1]Paper presented at the Tenth Annual Meeting of the Society of Projective Techniques and the Rorschach Institute, Denver, September 10, 1949.

twice by the same examiner, within a two week interval, the first time under "standard" conditions, and the second time under one of several experimental conditions. Twenty-seven examiners participated in the experiment. Both examiners and experimental conditions were randomized for the subjects. The records of 83 of the subjects were utilized in this study, the others being discarded because of unreliable conditions such as incomplete or inadequate recording, some "external" condition which made it impossible to re-test the subject, and the like. Before scoring the records, by two independent examiners, all identifying information, relating to the subject and the experimental conditions, was deleted. Briefly, the four types of retests were as follows: Condition I (Control), standard situation; Condition II (D and Dd), subject asked "to tell everything he saw" and in addition to pay particular attention to the "segmented" areas of the blots; Condition III (M), subject asked "to tell everything he saw" and in addition to find as many human movement responses as he could; Condition IV (F+, FC, H), subject asked "to tell everything he saw" and in addition to give only good form, combined form and color, and human movement responses.

The rationale for this design may be of interest. Rorschach and others have contended that subjects may volitionally increase their "scores" on certain variables, notably the intellectual variables, with relative ease, while subjects could not volitionally alter their scores significantly on the "deeper," unconscious, and emotional variables. More specifically, Rorschach concluded that certain of the intellectual variables, namely F+, sequence and A% could be increased, but that this increase was accompanied by a decrease in W, M and O. The latter three could be increased only if the individuals concerned possessed a constitutional tendency for such an increase. His judgments concerning the M response were not entirely consistent, but in general he maintained that "Subjects who consciously wish to produce movement responses will produce hazy interpretations," and again "Those factors not subject to conscious control, such as M and C, are more accentuated in elation than in hypomanic moods." A possible conflicting statement of his is that "Subjects who, in the ordinary experiment give numerous M's, can increase the number of kinaesthetic responses with relative ease." His conclusions regarding the Erlebnistypus were stated with considerable conviction: " . . . introversive and extraversive features are not acquired, but are inherent, primary qualities of the constitution," and, "The absolute number of M and C responses changes, but the proportion between them changes little or not at all."

Our experiment was designed to test the relative stability of some of the Rorschach variables at the various "levels" of personality organization. The "control" group offers the possibility of estimating the reliability of all of the variables under simple re-test

conditions. The "D" group (Experimental Group I) furnishes a test of the effect of volition upon a specified intellective factor D, together with other intellective factors. The "M" group provides for a test of a phantasy factor, presumably less easily modifiable. It also offers a crucial test of the stability of the M:C ratio. At the same time the design permits an estimation of the concomitant effect, if any, upon other than the experimental variables. Finally, in the third experimental group, the effect of a set of possible conflicting instructions may be noted. You will recall that the subjects were asked to increase simultaneously their scores in F+, FC+ and H. Under this condition, which of the three scores changes most significantly and for which types of subjects?

Our analysis of the data is still in process and so we do not yet have answers to all of our questions. Moreover, the findings are so extensive that, in this short paper, we can only hope to present some significant samples of our data. We should also like to say that almost all of the material on the intellectual variables was analyzed and evaluated by Robert Gibby (6), and the material on M and Erlebnistypus by Ohmer Milton (19), and the data on color and related variables were studied by Karl Pottharst.

First, let us look at the findings on test-retest reliability for the control group ($N = 21$). One can note certain disagreements with the findings reported by some earlier investigators. A selected number of correlation coefficients is presented. In some cases a Pearson r was computed and in others rho; we shall not go into the reasons for this at this time. Turning to the intellectual variables: the rho for W is .62; similarly the rho for (D + Dd)% is .62; but rho for A% is only .37 and for number of content categories is −.11; rho for number of R is .83; Pearson r for number of F+ responses is .81 but for F+% is −.13. A glance at some of the other variables: rho for number of M responses is .66; for sum Y it is .74 and for number of S responses it is .47; Pearson r for H% is .87; for number of FC responses it is only .08, while for per cent of color responses it is .66; r is high also for the non F%, namely .81.

We believe that these findings are important and significant for a number of reasons. While it is well known that a Rorschach interpretation can only be made in the context of the patterns of the test data and with concomitant consideration of the actual responses, the very great variability in reliability of the several Rorschach scores cannot be dismissed. Most obvious is the relatively complete unreliability, in this study, of A%, content categories, F+% and the number of FC responses. It seems well to evaluate these in a given record with considerable caution.[2]

[2]Because of the relative homogeneity of the sample studied, it may well be that the F+% is highly unreliable for such a group, and hence can hardly be used as a predictive base, and still may be discriminatory between a non-pathological and a pathological group.

It is also interesting that, in general, the reliabilities of all of these variables in the experimental groups, when the situation was structured, were considerably higher. We believe that a major reason for the lower reliabilities in the control group was the absence of a "structured" situation; hence, each subject entered the test with a variable frame of reference depending upon how he uniquely perceived the situation each time.

Finally our data suggest that there are characteristic group changes as a result of re-test. The mean scores for some variables go up while others go down. The data seem to indicate that in general more anxiety, constriction and withdrawal attend the re-test than the first test, but there are considerable individual differences in this respect. We therefore wish to emphasize the extreme caution which must be observed in interpreting changes in re-test scores — often erroneously attributed to change induced by therapy.

We should like to summarize some of the findings resulting from our experimental conditions. Here again, only samples of the data will be offered.

In general, the technique of mean gains was used, with corrections based on predicted scores from obtained scores when simple t tests were not feasible.

The "Condition I" experimental group shifted from a mean (D + Dd)% of 71.80 to 89.45, a gain of almost 18 percentage points. At the same time, the mean in *number* of W's decreased from 13.08 to 6.27, a reduction of about 50%. These changes, in comparison with the control group, are significant at the 2-5% and 1% levels of confidence respectively. It was also established that there were no significant, concomitant gains in the "emotional variables," i.e., M, sum C, sum Y, and S.

The data for the M group were equally significant. The "Condition II" experimental group shifted from a mean M score of 6.85 to 13.61, a gain of almost 100% in M. This difference, in comparison with the control group, was significant beyond the 1% level. Moreover, the increase in M's did *not* occur as a result of cheap, hazy or otherwise inferior M's. A study was made of M's in W and D, in Dd, of M+ and M—, of M's in H and Hd, of centripetal and centrifugal M's, and of M's in profiles. All of these studies support the conclusion that our subjects, as a group, were able to increase M's with comparative ease and the increase was one in which good, healthy M's were given. Moreover, there was no concomitant increase or decrease in other variables. Neither anxiety nor hostility was generated as a defense, and finally, there was no concomitant increase in sum C; on the contrary, there was a small but statistically insignificant decrease in C.

The data on the Erlebnistypus are equally interesting. Subjects were placed in three experience balance (E. B.) types, and later, for

more rigorous testing, into five such groups (after Hertz). On the first basis, 13 out of 21 subjects in the experimental group shifted in the category of E.B.; on the latter basis, 16 out of 21 shifted. The Chi Square, in the former case was 4.59; in the latter case, it was 3.65. The clinical interpretation made for those individuals who shifted would have been significantly different as a result of their changes in E.B.

We cannot go into all of the other changes our experiments tapped. It was found, however, that there is no *simple* relation between initial score on any of the variables studied and shift or increment on these scores as a result of volitional factors. It was possible to develop formulae, called stability scores, invented by Gibby and Milton, to predict the direction and amount of change. These may have important clinical value, but they need further study.

Now what do all of these data, plus others not summarized, indicate? First, and foremost, the various experimental Rorschach variables are unstable, roughly equally unstable, for our type of non-psychiatric population. If volitional and chance factors can so markedly influence test results, it may be presumed that unconscious factors may do so also. The Rorschach is a very sensitive instrument; therein lies its unique clinical value. But there is also the great difficulty in interpreting the results of this test, at least for non-pathological individuals, without thorough appraisal of the conscious and unconscious set with which individuals approach this test. What appears to be crucial is how the individual perceives the total test situation. If we do not know this, we are likely to make serious errors in interpretation. We have set ourselves, therefore, a most difficult problem: the need to appraise both the individual and the total test situation. This problem is especially relevant for the Rorschach test, but we believe it is also pertinent for all or most psychological tests, even highly reliable objective tests.

We have some initial clues. The stability score offers some help. Theoretically, we can expect to develop means whereby we can assess the individual's limits and capacity for change within a given test situation — in brief, we can do this by modifying the situation experimentally, using a small sample technique, and predicting limits from experimentally induced change. One of the authors has proposed a type of "testing-the-limits" which might be extended and tested further (10).

One final word. The "instability" on Rorschach variables which our "normal" experimental population manifests has, we believe, far-reaching theoretical implications. We can conceive of this "instability" as a capacity to shift. It is our belief that the healthy organism is sufficiently sensitive to variations in situations which confront him, and sufficiently adaptive to these variations, so as to

be able to *modify* his response pattern to deal most effectively with them. A mature ego, then, perceives "accurately" the field in which it is a part, and, in addition, has available a variety of integrated, or "ready-to-be-integrated," patterns with which to respond. Such an ego is highly differentiated, and hence highly perceptive. It is also integrative, that is, malleable and adaptive, but not integrated. The pathological ego is much more rigid in its defense system. It is either insensitive to variations in situational structure, because of unconscious ego needs, or is lacking in integrative capacity, because it has failed to develop a working inter-relationship in its separate patterns, or both.

Thus it may be that Rorschach's original hypothesis, which we could not confirm for "normals," will be substantiated for "abnormals": many clinical validation studies point to such a probability. If this is the case, a measure of capacity to shift on the Rorschach can become an important differentiating criterion of mental health. The more pathological the individual, the lower would the score in "capacity to shift" then be. At the same time, this would mean that prediction from the Rorschach record is a much more complex problem than has generally been recognized. It would seem that the less pathological the Rorschach record, the less valid is the simple, unrefined Rorschach psychogram, when taken at face value.

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Some Relationships Between Attitudes Expressed Toward the Parent in a Sentence Completion Test and Case History Data[1]

SELIG ROSENBERG[2]

A determination of the subject's attitudes toward parents is acknowledged to be of valuable assistance for a better understanding of personality structure and for use in diagnosis and in psychotherapy. The clinician interested in the use of the Sentence Completion Test as a device for determining attitudes and feelings towards the family unit finds it necessary to proceed on the assumption that a significant relationship exists between the family data revealed in the tests and the actual background, experiences and general case history of the subject. This study will attempt to determine the extent to which acceptance of this relationship is justified.

One of the earlier workers with the Sentence Completion technique, Tendler, (10, p. 136) stated that "the same stimulus evokes different responses from different individuals . . . that may have positive or negative ego references or social references." He concluded that, "this instrument has been found to be of value as a device for eliciting attitudes."

Rhode (4, p. 175) felt that the Sentence Completion device "is essentially a projective technique utilizing free associations" and that as a projective technique it revealed latent attitudes and aspirations which the subject would be unwilling or unable to recognize or express in direct communication.

Stein (8) in discussing a Sentence Completion Test which was originally developed as an aid in the selection of OSS personnel in the war, pointed out that the validity of interpretations written by the psychologist on the basis of test responses was highly dependent on his experiences, insight, and knowledge of the dynamics of behavior. He suggested that some factors which should be considered are: frequency and rarity, reaction time to each sentence, erasures, omissions and intensity of language.

Symonds (9, p. 321) offered a tentative conclusion from studies of the Sentence Completion Test in the OSS assessment program that "the Sentence Completion Test cannot be used to differentiate good and bad adjustment by any direct comparison of items or psychometric methods," but Rotter and Willerman (5, p. 47)

[1]Sponsored by the Veterans Administration and published with the approval of the Chief Medical Director. The statements and conclusions published by the author are a result of his own study and do not necessarily reflect the opinion or policy of the V.A.

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decided that "the method shows potentiality as a means for studying attitudes." However, Lorge and Thorndike (2, p. 199) stated that "verbal replies in Association and Completion Tests are largely unrelated to the real behavior of a person."

Sacks (6, p. 19) has recently noted among other conclusions that "the first person form of a Sentence Completion Test has been demonstrated to be an effective technique for determining the content of a subject's attitude in the categories or areas studied." The categories referred to were attitudes toward mother, father, family unit, heterosexual relationships, superiors, colleagues, future and goals.

It can be seen that opinions vary as to the extent to which valid interpretations may be drawn from Sentence Completion items. It was felt to be of considerable interest to determine the results in the one specific area of attitudes toward the parent.

The Sentence Completion Test described by Stein (8) consisting of two parts of 50 items each was administered individually to 72 male veterans, patients of the Veterans Administration Brooklyn Regional Office Mental Hygiene Clinic. All the patients were diagnosed as psychoneurotic by the treatment psychiatrist.

These tests were analyzed and items referring specifically to either parent were noted and the attitudes expressed were scored as positive, negative, or evasive. It was felt that these categories were broad enough to minimize greatly the possibility of errors in evaluation. A positive response for example might be tallied for such extremes as, "His mother is O.K." or "His mother is a wonderful woman and he loves her." A negative response would be considered for such items as "His mother annoys him," or "His mother despises him." Evasive items might read, "His mother is 48 years old." A final score of positive or negative attitude for each patient was arrived at by determining the greater number of test items in the particular category. A final score of evasive attitude was arrived at in the absence of any positive or negative items. An evaluation was then obtained for each patient by personal interview with the psychiatrist, psychologist and psychiatric social worker. Only those opinions were accepted where the psychiatrist had completed at least ten hours of treatment, the psychiatric social worker had obtained an intensive case history and the psychologist had interpreted a battery of tests. No case was utilized for study unless all the judges concurred in the ultimate evaluation and data in treatment folders either confirmed the judges or were noncontradictory. Treatment folder data were appraised on the same basis as the Sentence Completion items. Positive or negative scores were then obtained from these criteria for each patient. Since only those cases were used where either a definite positive or negative opinion was available, the need for a score of "evasive" by the criteria was obviated.

The scores accumulated for all patients from test responses on the one hand and psychiatrists and other sources on the other hand were compared and tallied as to the number of agreements and disagreements. The number of evasive answers in the test was noted.

Results

The results obtained in the manner described above are summarized in Table I:

Table I—Attitudes Toward Parent from Sentence Completion Test Compared to Criteria

	Father	Mother
Agreement		
No. of cases	42	50
Percentage	58%	69%
Disagreement		
No. of cases	8	10
Percentage	11%	14%
**Evasive*		
No. of cases	22	12
Percentage	31%	17%
	N=72	N=72

*This applies only to Sentence Completion Test scores

From Table I, it is noted that 42 patients out of 72 or 58 per cent gave responses referring to the father which were in agreement with other data available. In items referring to the mother, 50 out of 72 patients or 69 per cent gave responses which were in agreement with the other data available.

Bearing in mind the possibility that evasive answers may appreciably reduce the effectiveness of this tool there is a reasonable expectation here that use of the Sentence Completion Test items will yield much significant information. Attitudes toward parents may be learned from the manifest content with some degree of assurance that our interpretations are in accord with the subject's actual feelings. We are unable to evaluate at this point the actual extent to which not only conscious but also repressed feelings are revealed but there seems to be adequate evidence that to a considerable extent in this group the Sentence Completion Test carries out its role as a projective technique.

It appears, therefore, that conclusions in relation to attitudes toward parents as interpreted from the Sentence Completion Test may be considered as having valid foundations in fact in many cases, and that the attitudes expressed are worthy of further exploration for determination of important data pertinent to an understanding of dynamics and planning for treatment.

It is most interesting to note, however, that several dramatic disagreements tend to show the need for caution in accepting the agreement data noted above.

In the case of patient C.G., the Sentence Completion items were given as, "Bud's family are nice, good people." "His father is very nice," "His mother is a nice woman." However, patient's attitude as revealed to the psychiatrist during 50 treatment hours were, "My mother will do anything for my other brothers, but not for me. She has no feeling for me whatsoever and I reciprocate also. Both my father and mother were against me as a child; they beat me terribly, and I won't forget it. My father is the cause of my failure; I blame him for everything."

In the case of patient P.K., the Sentence Completion items were given as, "His father is a good guy," and "His mother tries to help him," but other data reveal contempt and hatred for the father who is a drunkard and "who ruined my life." Negative feelings were verbalized toward the mother who placed him in a foster home. He rebuffs her every advance.

Patient A.F., on the Sentence Completion Test states that, "His mother is very good to him," but other data showed that, "I hate staying with my mother, life is miserable with her."

Patient D.A., said in his Sentence Completion Test that, "His father is a fine fellow," but other data reported that the patient "had frequent quarrels with father who had a violent temper and always tried to start trouble with patient."

These examples point out the need for flexibility in interpretation and emphasize the possible role that wish fulfillment desires and fantasies may play in responses in projective techniques.

The relatively high number of responses scored "evasive" require evaluation. In those responses referring to the father, 22 of the subjects or 30 per cent were evasive. In those responses referring to the mother, 12 of the subjects or 17 per cent were evasive.

TABLE II—Analysis by Criteria of Evasive Attitudes Toward Parent in Sentence Completion Test

	Father	Mother
Positive Attitude by Criteria		
No. of cases	6	4
Percentage	27%	33%
Negative Attitude by Criteria		
No. of cases	16	8
Percentages	73%	67%
	N=22	N=12

Analysis of these responses (Table II) reveals that in the "father" category, 16 of the 22 evasive subjects or 73 per cent were revealed by the criteria to have negative attitudes toward the father. In the "mother" category, 8 out of 12 evasive subjects or 67 per cent were revealed by the criteria to have negative attitudes. Bearing in mind the limitations of this small number of cases, it appears that in accordance with general clinical impression the trend in these evasive responses is toward the concealment of negative attitudes.

Other questions are raised here. Why were evasive responses so much greater in reference to the father? Is there a significant difference here which might infer a greater reluctance to reveal attitudes toward the father? Furthermore, are these subjects evasive only in the area of attitudes or are they generally evasive individuals? It is beyond the scope of this paper to review this area but further investigation may yield informative data.

The present findings are not extreme nor entirely unexpected when compared to other studies. Sacks (6) found significant agreement with other criteria in attitudes toward father and mother when the Sentence Completion items were given in the first person (Form A). However, in the Sentence Completion items given in the third person (Form B) the agreement was significant only in the attitudes toward the father. The attitudes expressed toward the mother did not deviate significantly from chance.

Our findings utilize Sentence Completion items with a combination of both first person and impersonal items. Out of 100 items, 32 might be considered as related to the patient while 68 were impersonal. The items utilized in expressing attitudes were from both categories, so that in general, our results tend to agree with Sacks' conclusions. Likewise, our conclusions are in general accord with Tendler (10), Rhode (4) and Rotter and Willerman (5).

Summary

The Sentence Completion Test results of 72 white male veterans were analyzed and the attitudes toward each parent were scored as positive, negative and evasive. These scores were compared to scores given to attitudes expressed by the patient elsewhere and known to the psychiatrist, the psychologist, the psychiatric social worker and available in treatment folders.

It was revealed that attitudes expressed toward the father were in agreement with these criteria in 58 per cent of the cases, and that attitudes expressed toward the mother were in agreement with the criteria in 69 per cent of the cases. Evasive test responses in reference to the father were given in 31 per cent of the cases and in reference to the mother in 17 per cent of the cases. The evasive responses show a trend toward the concealment of negative attitudes.

These results are consistent with conclusions in related studies that the Sentence Completion Test is potentially a valuable tool in furnishing clues to a determination of attitudes toward parental figures.

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BOOK REVIEWS

Aron, Betty. *A manual for analysis of the Thematic Apperception Test, a method and technique for personality research.* 1512 Spruce St., Berkeley 9, Calif.: Willis E. Berg, 1949. Pp. xiii, 163. $3.50.

The greatest single obstacle to the wider use of the TAT is the lack of a scoring system comparable to Rorschach's in simplicity, the ease with which it may be learned and applied, and in the significance of the distinctions it makes. It seems unlikely that such a system will ever be worked out, due to differences in the kinds of data yielded by the two tests; in spite of the anchoring effect of the pictures, the TAT story has (so to speak) many more degrees of freedom than the Rorschach response, whence its peculiar combination of richness and impalpability.

It is no discredit to Miss Aron, therefore, to say that her book does not succeed in providing the philosopher's stone. Just what ores, precious or base, are locked within the stonily forbidding difficulties of her method it is difficult to say on the basis of merely reading her book. It would be necessary to learn and to apply the system she outlines, and preferably to compare the differentiations it yields to those afforded by other methods of analyzing stories. Judging from its careful, psychologically-based construction and from the suggestive results of the sample studies she reports, it is well worth such a trial by those interested in personality research.

As the subtitle explicitly states, this is a method for research, and the author is careful to make it clear that she does not expect much immediate clinical application of it. She is careful throughout to avoid sweeping claims, and she does not underestimate the difficulties of the way she is pointing. It is presented as having gone through enough stages of revision to be shared with other workers, while still further revisions will be made. It is as a working document, oriented toward research, that it will be evaluated here.

It is too bad that a method of the importance I believe this one will prove to have, had to be presented with such a constant eye to economy. That probably accounts for the book's over-brevity. In about a hundred pages of text, Miss Aron presents in a condensed manner an explanation of the steps through which a scorer must go to use her system; she lists and defines the many variables used and the notations that modify them in ways indicated above as well as a few others; she gives fifteen stories drawn from quite different populations of subjects, with complete scoring; she describes certain technical procedures for recording and summarizing the scores and concludes with detailed citation of four "sample studies" which illustrate the kinds of data provided by the system and the kinds of

interpretations that can be made on their basis. It seems to me that 100 pages is too narrow a compass within which to attempt so much, though she wastes little of the space.

There are seven steps through which the scorer goes. First, he sets down on a worksheet an abbreviation designating each character or object in the study to which any variable is attributed—including "The Environment," if necessary. Each such notation is put at the head of a column, in which are listed all variables relevant to it. Second, the scorer identifies the hero or heroes. Third, he reads through the story, noting all variables under the appropriate columns. When a striving is the hero's, it is *need;* when it is someone else's, it is recorded as *press.* Fourth, "the source of complementary variables, i.e., the source of the precipitating press or the precipitated need, is recorded in front of the variable in question." Fifth, note is made (by the symbols for kinds of defenses) of the ways scorable trends are described when not freely expressed by the hero. Sixth, the scorer assigns numerical "intensity values" to each variable in the main story content. Finally, he records the outcome of each episode.

It is clear, from this description, that the technique has certain limitations, most of which are admitted. It deals only with content, deliberately leaving the question of formal aspects aside, for the most part. It is somewhat atomistic, in that each dynamically meaningful sub-part of a story is scored separately, yet with an ingenious system of notations that preserves many of the important aspects of its context. Miss Aron started out to revise the Murray-Sanford method of scoring needs and press to make it more useful, and she found that it could be simplified only by making it more complex. The many clinicians who have dismissed Murray's approach as impracticable will undoubtedly feel the same way about this one when they spy the scores of distinctions that are now required, and will go back to their global, intuitive analyses. For daily clinical use, they are quite justified, but if this attitude is expressed by a researcher, he can only be advised to choose a less complex field of inquiry than is personality. To do justice to the multifariousness of human motives, a handful of concepts simply will not do.

Those familiar with the Murray-Sanford system of analyzing TAT stories will recognize only the second, third, sixth and (to some extent) seventh steps as carry-overs. In modifying the older scoring method, the author says that she was guided by both theoretical and empirical considerations: the distinctions made were those suggested by psychoanalysis and by Murray's personology, but when they could not be reliably scored by different raters they were changed until they could be, or were dropped. How is one to evaluate the changes? The ultimate test can only be an empirical one: the demonstration that the new system differentiates better between groups known to be diversely constituted

psychologically, or that the new quantitative scores correlate more highly with indices of known validity—in each case, as compared to the earlier system, or as compared to any other scoring schemes (for example, Wyatt's or Henry's). One gets the impression that the failure of the Murray-Sanford scoring to differentiate prejudiced groups in the Berkeley Public Opinion Study was responsible for the changes, and that the revision did provide good differentiation. But in the present book Miss Aron tells us nothing of all this, possibly because she has discussed it in her chapter in the forthcoming report of the total research project on which she was working, *The Authoritarian Personality*. Some citation of results from the studies of anti-semitism would have helped the present book, nevertheless.

In the lack of empirical data, then, the modification will have to be evaluated on theoretical bases and by rule of thumb. I think that the first modification—recording the figures and objects to and from which dynamic trends emanate and are directed—is prima facie an excellent one. In totalling the scores for Nurturance in mother-son stories (card 6BM), for example, it is desirable to be able to separate the son's nurturance towards the mother from the mother's towards the son. In large part, this distinction is made by differentiating needs and press, but even so it is often lost. The second major innovation sounds like a valuable one, too: the introduction of special notations to record certain kinds of defenses that operate in relation to the trends expressed: conflict, denial, rejection (i.e., unacceptability), displacement of identification (which includes a special notation, *f*, for fantasy, memory, wish or dream instead of action) and "restriction of ego expression by describing static [i.e., characterological] features rather than behavior" of a figure. The exact psychological significance of all these defenses is not easy to determine, but research on this problem should be well worth the doing.

A further contribution of the present manual is that it provides relatively objective and understandable criteria for performing some of the more judgmental aspects of scoring: identifying the hero, and especially quantifying ratings of the intensity of needs and press. Regrettably, it does not do so well in defining and making clear the differences between all of the variables used. Miss Aron's suggestions about procedures to be used in research are knowing and helpfully concrete.

A further set of differences from Murray is in the specific variables used. Here my prejudices and preferences do not always agree with the author's. The additions of *p Blamavoidance*, *p Infavoidance* and *n Blamescape* (the latter from Sanford) sound good to me, and I think little was lost by dropping *n Exposition*, and (for many purposes) *n Excitance*. But why no *n Nutriance* (the taking of food and drink)? Why no *n Passivity*? These are

often very significant features of TAT stories. Likewise, I should have retained the distinction of *n Aggression: Destruction* from *n Aggression: Physical;* as it is, the same score is given when the hero fights with somebody and when he smashes his car in an auto accident—events with quite different significance. Combining *n Order, n Achievement* and *n Construction* under the last heading loses frequently useful distinctions. A few other minor criticisms may be levelled at specific variables: in addition to the "endogenous benefit" of Mental Health, there is another called Mental Health-Intelligence, which is scored for any kind of talent. With the present headings, one would get into an absurd fix trying to score the statement: "The boy is bright though rather neurotic." Then, it seems forced, to say the least, to score thinking, planning, and studying as "Mental Sentience" and then to combine it, in summarizing, with other "sensory aspects of behavioral trends"—physical, sexual and esthetic sentience!

These are not basic objections, by any means. If they have weight, they can be incorporated into a revision of the Aron scheme which would not change it in principle to the slightest extent. The same is true of other minor criticisms that might be made of the book itself, which contains a rather annoying number of typographical errors. Only one of them is of much consequence: on pp. 79-84 and 136-141, the good old boy-and-violin that has always led off is persistently called Card 7 instead of Card 1. The book could have been further improved by the addition of a sorely-needed glossary for the great number of new abbreviations. To conclude these minor criticisms, I cannot resist the temptation to point out a rather funny "interpretation" of the short-comings in the pioneering efforts of two practising psychoanalysts, Murray and Sanford, to quantify dynamic content: they, "like many other personality psychologists who have been influenced by research with lower animals, tended to overlook mechanisms, many of which are specific to man, that make for a vast range of personality differences"!

Whenever a complex scheme for the analysis of qualitative data is proposed, the interested researcher may well ask about "observer reliability"—how well do different scorers agree? It is not easy to answer such a question when one's system contains so many dimensions of variability. Miss Aron has approached the problem with the intent of finding one or two measures that will demonstrate the overall reliability of the method. This is an essentially defensive approach, and its results in this case are not very helpful. By a complicated system of rating all differences between raters, she arrives at a set of overall figures which claims from 69% to 85% "complete agreement," on different samples, with from 9% to 12% full errors. But it cannot be concluded that these figures mean that two raters assign identical scores a majority of the time. Many

differences are considered to be "no difference," because they have approximately the same interpretative significance—which makes one want to ask, why make such distinctions in the first place, then? Other differences are considered separately as "lack of acuity" on the part of one rater: where one rater scores something that the other simply failed to see. The result of using this method of reporting reliability is to make anyone who has a skeptical turn of mind suspect that there was not actually a very high degree of agreement on many categories, especially considering the fact that the scorers had been trained and closely supervised by the author. It is quite sensible and legitimate to distinguish between differences that are serious and those that are less so, but it would have been much better to have kept separate the actual agreements and the insignificant differences. And, of course, overall reliability doesn't mean much in such a system; the important question about reliability is: *which ones* of the many discriminations called for can be made with a satisfactory degree of agreement, which ones are difficult or impossible to make? Improvement of the method demands the latter approach.

As far as validity is concerned, we get a number of encouraging hints in the chapter on Sample Studies, but nothing definite. Of course, the problem of validating such a method as Miss Aron's is a very thorny one. But it would have been more convincing to have enlarged the N on one or two of the four miniature studies so that a few significant differences between groups could have been reported instead of a larger number of interesting, often plausible, but very possibly unreliable trends. What the chapter does show is that the method yields quantitative group results that lend themselves easily to psychodynamic interpretations with a minimum of far-fetched inferences. This fact alone is a weighty endorsement of the Aron method as a promising research instrument.

Looking back, I see that I have found more to criticize than to blame. Yet I feel that the criticisms are mostly minor, the good points mostly major, and that in the balance Miss Aron has made a contribution of solid importance to research with the TAT.

ROBERT R. HOLT
The Menninger Foundation

Bellak, Leopold and Bellak, Sonya S. *Children's Apperception Test.* New York: C.P.S. Co., P.O. Box 42, Gracie Station, 1949. 10 plates and manual, 13 pp. $5.00.

The standard set of TAT plates issued by Murray contains three pictures specifically for boys and girls, two of them suggested by Sanford on the basis of his experience with the children of the Shady Hill study. Using these to substitute for a couple of the adult series, the set is supposed to be adaptable for use with chil-

dren of seven years or younger. Sarah Schafer and Mary Leitch have demonstrated that some of the pictures have a limited usefulness even with nursery school children. Why, then, a special set of cards for children?

The primary practical reason is that the TAT is rarely a very productive instrument with pre-adolescent or younger children. Though the material it provokes is often scanty, it is useful enough to be employed routinely by a number of persons working with children. But if a picture-story test could really tap the rich fantasy life of the child it might have far more usefulness for diagnostic and therapeutic work, and for research. It looks as if the Bellaks may have provided us with such a test.

The principal theoretical reason for designing a new set of pictures was suggested by Ernst Kris, the manual tells us. "Theoretically, we had reason to assume that animals might be preferred identification figures from three years up to possibly ten," the authors say, "and thus we set out to create, pictorially, situations vital to this age range." A further advantage cited of using animals is that they make the test easily usable with Negro children and almost any others within the Western-European cultural framework.

The pictures themselves were drawn by Violet Lamont, an illustrator of children's books, and show a sure professional touch. The sprightly animal figures, some naturalistic, some with human accessories like hats or a pipe, have style and charm, and certainly appealed to a complete sample of one population, the reviewer's own children. These little girls, aged four and a half and three years, fell to the game of making up stories with relish, and seemed to identify themselves with the animal children with great ease and naturalness. Of course, such a miniature try-out cannot show anything more than the fact that it *is* possible for very young children to take to the test and to produce usable material freely.

Eighteen pictures were used by the authors and a number of other clinicians in preliminary try-outs, and the ten most useful retained. They seem to have been well chosen to touch upon the most significant problems and conflicts that most children in our society are likely to encounter. "The pictures were designed with the hope of eliciting responses to: feeding problems specifically and oral problems generally; to problems of sibling rivalry; to illuminate the attitude toward parental figures and the way in which these figures are apperceived; to learn about the child's relationship to the parents as a couple — technically spoken of as the oedipal complex and its culmination in the primal scene . . . Related to this, we wish to elicit the child's fantasies around aggression; acceptance by the adult world, and its fear of being lonely at night with a possible relation to masturbation, toilet behavior and the parents' response to it."

The manual contains general historical and explanatory material about the test, some helpful remarks about administration, descriptions of the pictures with "typical responses" to them (presumably based on the hundred cases to whom the test had been given at the time of writing), some remarks on interpretation with sample stories and their analyses, backed up with some clinical data, and a final note on "research aspects." In this the authors state their feeling that when one is dealing with projective techniques, all that is necessary by way of standardization is to try a new one out and see that it gives useful material. For the rest, one relies upon "the basic hypothesis of projective – or apperceptive – phenomena," and "the individual case can stand by itself." They do not wholly side-step the problem of norms, however, saying that it would be very desirable to assemble them for different age levels, but too difficult a task for a single team of investigators. The fact that this seems to be S.O.P. for the production of new projective tests does not make it any more desirable. The authors do go a good deal beyond what is usual, however, in their generous offer to cooperate with all users of their test, "to organize all available findings and make it available to users of the C.A.T., upon request" and to act "as an informal clearing house."

A recording blank and analysis sheet very similar to the *Bellak TAT Blank,* for adults, is included and its use recommended. The general discussion of interpretation is organized around it. Persons who are unskilled in analysis of thematic materials will probably find the examples of interpreted stories more helpful. The orientation given is sound, but of course no one should expect to learn interpretation from reading a manual, short or long.

Taken as a whole, the test (and particularly the manual, which is rife with minor errors and carelessness) show signs of being put out in a little too much of a hurry – compare the Four Picture Test, published after 18 years and the experience of thousands of administrations. Nevertheless, the C.A.T. is a very promising-looking addition to the available instruments for testing young children.

ROBERT R. HOLT
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Shneidman, E. S. Schizophrenia and the MAPS Test. *Genet. Psychol. Monogr.,* 1948, 38, 145-223.

Under normal circumstances, a monograph of this dimension would scarcely merit independent review. As a report of a single clinical experiment, it follows the traditional pattern of carefully defining a problem, reviewing previous literature, describing procedures and populations, presenting data, and arriving at conclusions, which in this instance are not of singular importance. Because the monograph also serves as the manual for a new and im-

portant projective method, the Make-A-Picture-Story (MAPS) Test, it becomes worthy, however, of especial attention.

It is the chapter on materials and procedure (III) and that on quantitative results containing the MAPS Test Signs (V) that will have the most interest for the clinician. The MAPS Test materials consist of 22 background pictures and 67 figures used for populating the backgrounds. There are two steps in the Test's administration: (1) the construction of pictures using the backgrounds and free choices from the available figures, and (2) the telling of stories in a manner similar to the story-telling procedure in the TAT. As the author indicates, the MAPS Test is in direct line of descent from the TAT. It uses also the method of movable parts, first suggested by Horowicz and Murphy, and later adopted by Amen and others. Because of the manipulative factor in the test performance, it has certain similarities to the various doll-play methods of revealing fantasy.

In this present study, the author has focused his attention on formal analysis of the protocols of matched groups of 50 psychotic patients, primarily paranoid schizophrenics, and 50 hospitalized non-psychotic patients. By formal analysis he means the study of "which figures are chosen, how many are chosen, where they are placed on the background, how they are handled by the subject, and what relationship they bear to each other." He developed a list of signs, or objective scores (800 in this study) by which such analysis might progress. While recognizing that contentual analysis, after the manner of TAT interpretations, would probably provide the major diagnostic value of the MAPS Test, he bases his study on the objective aspects of the fantasy creations, claiming rather broadly that "the unique contribution of this study lies in the interpretation of the *formal* aspects of fantasy production." While the MAPS Test does permit of ready analysis by formal techniques, it is to be recognized that this is not a unique property of this test. Formal analysis is a characteristic, if not always explicit, interpretative method of all projective techniques, including all those which are based on fantasy productions. While formal analysis in the MAPS Test is not a unique interpretative method, the monograph illustrates that it may be possible to develop it here with greater ease than in other techniques because of the large number of quantifiable results.

It must be stressed, however, as the author has stated, that use of the MAPS Test for formal analysis will depend upon the multiplication of normative studies with many clinical groups. This is one of the handicaps in using formal analysis in any projective device, a limitation that applies with as much force to the MAPS Test as to any other.

The MAPS Test, as Klopfer has indicated in his Preface to this monograph, adds "information not easily revealed by existing techniques;" and lends "itself readily for inclusion in a well integrated battery." One of the advantages observed in use of the Test is that the subject, in telling a story about a picture he has created, has potentially less stress in revealing fantasy than when he is required to associate to a more ordered stimulus as in the TAT. This may lead to greater productivity in fantasy; it may, however, be disadvantageous in not reflecting as readily a subject's reactions under pressure. The freedom of choice of figures would seem also to enhance "the possibilities . . . for personal identification and interpersonal projections." The inclusion of figures representing minority groups serves to make the Test of usefulness in the study of racial attitudes and tensions. The materials are of wide enough interest to make them applicable to the study of children, adolescents and the total adult range. Further uses of the materials for a sorting test and for a "miniature psychodrama" have been suggested by the author.

Dr. Shneidman's study well illustrates another potential use of the Test. In his final chapter he has attempted to generalize on the characteristics of schizophrenic fantasy and behavior on the basis of the signs that significantly (i.e., in this study below the 10% level of confidence) differentiate schizophrenics from normals. Thus he tentatively concludes that schizophrenic fantasy is marked by "(a) intra-group variability; (b) self-identification; (c) variability of identification; (d) social isolation; (e) over-inclusion; (f) inappropriateness; (g) symbolization; (h) desire for environmental simplification; (i) inhibition of fantasied violences; (j) punitive conscience; (k) lack of identification with normal masculine role; (l) religiosity; and (m) debasement of women." While he has overextended his conclusions by failure to qualify that his groups of schizophrenics is a paranoid group, and has spoken of his conclusions as relevant to "schizophrenia," he has demonstrated that as a tool for research into the nature of fantasy behavior the MAPS Test may be of more than considerable value.

The monograph has thus served to introduce effectively a new technique that appears distinctly worthy of further experimentation and clinical application.

JOHN E. BELL
Clark University

THE TAT NEWSLETTER

VOL. IV, No. 1 Summer, 1950

ROBERT R. HOLT, EDITOR
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TAT Round-Table Coming Up: Three years ago, in the summer 1947 issue, there was advance notice of an APA paper session to be devoted to the TAT and related techniques. Once again I am pleased to report that there will be a time set aside for the TAT during the APA meeting this fall. This time it is to be a round-table discussion of the problem of central interest and importance for most of us: interpreting the TAT. The participants will be Bill Henry, Dan Levinson, Les Luborsky, Julian Rotter, and Fred Wyatt. Your editor will serve as chairman. It promises to be a session of value to all the Newsletter's readers.

A Call for Unpublished Theses: Did you write a thesis on the TAT for your M.A. or Ph.D.? If so, you probably put a great deal of work on it, and you know how much more there is in it that's potentially valuable to others who use the TAT than you can get into a brief article or so based upon it. But you don't have to fold your hands and hope that people will discover your pearls via interlibrary loans. Send a clear, (preferably an original) correct copy to the Newsletter, and it will be forwarded to the American Documentation Institute.[1] There it will be given a document number, photographed on microfilm and filed. The Newsletter will then print the title, a short abstract, the document number and its cost to anyone who wishes to obtain a copy. Microfilm copies, which can be read in reading machines available in most libraries and elsewhere, cost about 1c a page; legible positive photoprints only slightly smaller than the original cost about 10c a page. The cost to author and Newsletter is nothing; the interested reader can get access to it more easily than through a loan, and retains his inexpensive copy permanently.

In the next Newsletter, the first of what I hope will be a long list of such documents will be described. Mrs. Edith E. Fleming has sent me a copy of her master's thesis, "A descriptive analysis of responses in the Thematic Apperception Test," a few of the results from which she published in a joint article with Saul Rosenzweig last year in the *Journal of Personality* (See #60 in the Newsletter's bibliography, last issue). It is an excellent piece of work, containing an exhaustive apperceptive analysis of 100 sets of TAT stories told by normal subjects, and the Newsletter is pleased to

[1] ADI, Science Service Bldg., 1719 N. Street, N. W., Washington 6, D. C. For more details about this valuable institution, see Britt, S. H., The psychologist and the American Documentation Institute. *Amer. Psychologist,* June, 1949, pp. 180-181.

make this most comprehensive and valuable of normative studies available to interested users of the TAT everywhere.

News of the Clearing House: This and the subsequent department, usually the backbone of the Newsletter, had to be omitted from last time's issue (along with the two book reviews printed this time) due to lack of space, so there is a good deal to report.

Requests for the loan of TAT protocols have come in from Rosalind Dymond, of Mount Holyoke, who wants study empathy in schizophrenics, and from John B. Miner and Robert A. McKinley, of Princeton. The latter pair were doing undergraduate thesis research on the personality structure of chronic alcoholics, under the supervision of Silvan Tomkins. Other kinds of requests also turn up in the mail box at times, too. For example, the chief psychologist at a VA hospital in Roanoke, Virginia asked for help with the problem of assessing suicidal and homicidal tendencies in veterans beyond their middle 60's who were being screened for home placement. Unfortunately, the clearing house does not contain a repository of all existing knowledge about the TAT and its many uses. In cases such as the last, I simply do the best I can.

Good news! Another subscriber reports on his stockpile of TATs. Leon J. Yarrow, who is working with the Child Research Council of the University of Colorado School of Medicine in Denver, writes:

> "During the past year we have collected a good bit of TAT data on the children in our series, between the ages of 4 and 24, also on some of the parents. Except for individual case analyses, we have not yet done any systematic work on the data. We have a lot of good material for validation with life history material and cross-validation with other projective material—Rorschach, play, Szondi, etc. I hope sometime soon we will be able to report on the state of our TAT research."

From the Speech and Hearing Clinic at Penn State, where the APA is to meet soon, Charles R. Elliott sends the following communication:

> "At an early date, I will try to write you about the experiences I have had in using the Four Picture Test with subjects in a Speech Clinic. I should also like to contact people using the Murray TAT and the Thompson TAT together, particularly, in studies in attitude and changes in attitude. I am using them in a study I am doing at the University of North Carolina for my Doctorate and I have some problems in quantifying an analysis in a comparison of the two tests."

Research in Progress: Our French correspondent, Dr. Jacques Bert, tells about a new and possibly very valuable research method he has been using at the Neurobiological Laboratory, Hôpital de la Timone, Marseille.

"I have worked with the TAT only a little during this past year. I have undertaken the study of electroencephalography, more particularly in the mental diseases. I have, however, made an electroencephalographic study of the TAT with the help of Grey Walter's electronic analyser. I have studied the action of some of the more striking pictures (3, 4, 8, 10, 13, 15) on the theta rhythm, described by Grey Walter and Hill as connected with affectivity, which is indisputable. Unhappily, the results obtained with 25 medical students have not been satisfactory; therefore I have not published them. But it is obvious that the picture giving the maximum reaction is 13, then 8 and 14. With a serious use of Grey Walter's analyser I think this method is able to yield very interesting results in the study of cerebral phenomena [associated with] affectivity. But some much more thrilling stimuli of emotion ought to be used; I think some views of a film (talking) properly chosen would be a good technique in this research. But not having all the necessary apparatus I was not able to try. It is even obvious that this study during some consultations of psychoanalysis would give many an interesting result. Indeed, among the students I had a fellow living in a very conflictful situation in his family (his mother forsaken by his father, and married again to an alcoholic man). Very seldom had he spoken to me about this familial situation, his most intense dislike of his father and stepfather. In the TAT, I chose picture 7; the maximum [E.E.G.] reaction was obtained with this one which he placed last, saying it was quite indifferent to him, and he was not thinking of what story he could tell about it."

Dr. Bert closes with the news that he is soon to be sent to French Western Africa, where he may use the T-TAT. The *Newsletter* wishes him well, and will hope to hear something about his experiences using the Thompson modification with Africans.

A recent VA research bulletin yields the following list of researchers and their current topics:

Alden, Priscilla.	Construction of a colored thematic apperception test examination.	Louisville VA Hospital
Milstein, F. A.	Comparison of TAT production on verbal and written administration.	Detroit, Michigan. MHC
Rubin, H.	A study of the effects of group psychotherapy sessions on attitudes as reflected by the Rotter Incomplete Sentences and selected Thematic Apperception Test Cards.	Chillicothe VA Hospital
Broida, D. C.	An evaluation of certain hypotheses concerning suicide on the Rorschach and Thematic Apperception Test.	Canandaigua VA Hospital

A fuller description of the last project is given in some correspondence kindly forwarded by Charles Thompson:

> "I used only Card 3BM of the Murray TAT to test the specific hypothesis that has been advanced by D. Rapaport (Diagnostic Psychological Testing, Vol. II) viz., that Card 13M (Card 3BM of the latest edition) usually reveals preoccupation with and causes of depression and suicide. The study was undertaken to determine the incidence of suicidal and depressive themes on this particular card as produced by a group of known suicidal patients. For this purpose I obtained responses to the above card from twenty (20) non-suicidal patients equated with the former group as to age, diagnostic classification, educational level, etc. At this writing the data are still undergoing analysis though nearing completion . . . the following results are subjective and must wait verification by judges who are analyzing the protocols. From a cursory analysis there appears to be no difference between the two groups in terms of frequency of themes involving suicide. I have not subjectively analyzed the themes for frequency or type of depressive ideation. Suicide is the essential theme in about three or four of the productions of the suicide group. Thus it appears that suicidal themes on the card might very well be an artifact of the stimulus value of the card per se, rather than a reflection of the needs and press or dynamics of the individual."

A Ph.D. thesis is reported under way by Harriet Bentley (7155 Eastlawn Drive, Cincinnati) on "The development of a short form TAT based upon patients' own selections."

A thesis recently completed for the M.A. degree by Vernie Iazzetta was called to my attention by Allan Murphy, of the Denver public schools. The author describes her work in these words:

> "The title is: An Exploratory Study of Certain Differences between Delinquent and Non-Delinquent Girls as Indicated by the Group Thematic Apperception Test. The thesis was written for the Master of Arts degree and the date of completion was December 9, 1949.
>
> The purpose of the study was to explore the possibilities of the group (Clark, 1944) form of the TAT in showing differences between delinquent and non-delinquent girls. Sixteen institutionalized delinquent girls between the ages of 12-8 and 17-6 were matched individually with non-delinquent girls on the basis of age, IQ, and socio-economic status. All were of Spanish or Mexican descent and of the Catholic faith. The sub-section, Need for Affection, was the only category of the test which indicated a significant difference between the groups at the 5% level of confidence. In this case the non-delinquent subjects indicated more need for affection as shown by their choice of stories. Results of this test, on the whole, were similar for the two groups."

Other such good leads to unpublished dissertations will be greatly appreciated.

A year ago, the Newsletter carried a brief report from the University of Kentucky on a cooperative M.A. thesis problem: personality correlates of ethnocentrism and submission to authority. (Incidentally, one noteworthy trend in letters of the past year is the increasing numbers of students who are working together on aspects of a larger problem for separate or combined theses. *Viva* cooperation!) At any rate, during the early months of this year, I had some further correspondence with a new member of this group, Arthur Glickstein, who has taken over the TAT part of the research. He sent in a rather ambitious outline of the study, as well as the following descriptive remarks:

> "To differentiate our extremes we used a questionnaire identical to the one used in a recent study at the University of California by Else Frenkel-Brunswick, Sanford, Levinson, et al. Gerald Laulicht is using the interview technique and the autobiography, Herbert Auerbach is using the Szondi technique, and I am using a combined set of Murray and Thompson TAT cards."

I sent back some suggestions and criticisms, and received a further letter of thanks and fuller explanation. One important feature of the study will be that when subjects (extremely prejudiced and unprejudiced according to Dan Levinson's scales) are tested and interviewed, the researchers "will not know in which category they fall; the names and addresses of these subjects will be mixed together so that when we contact them we will not know which is which." As so often is the case, the crux of the problem for Arthur Glickstein is what scoring categories to use.

A recent Newsletter carried a suggestion from Leo Bellak that it was time for cooperative normative research, but this too must await a scoring scheme on which the cooperators can agree. The proposal aroused an enthusiastic response from Bill Walcott (now at Patton State Hospital, Patton, California). Says he:

> "I told you I'd write again soon when I felt inspired to do so. Well, the remarks of Leo Bellak which you included in the Vol. III, No. 3 *Newsletter* regarding picture norms have done the trick . . . It just so happens that I tackled that problem in a project for an Experimental Psych seminar several years ago with the idea that it would be preliminary work for a Ph.D. thesis. The enormousness of the task cooled my enthusiasm, though . . . I made use of 25 stories each told by 'normal' male subjects to cards 3BM and 4. . . I began by breaking the stories down into what might be considered their component parts; i.e., the general situation described, the events leading up to it, the outcome, and the thoughts and feelings of the characters. The four component parts were further broken down into the actual content as revealed in the story. For example: 'events leading up'

to 3BM: 6 subjects said—love object was killed either by hero or another person, 5 said—rejection by a loved object, either temporarily or permanently, 4 said—love failure or difficulty, 1 said—personal failure, 1 said—need to escape, 1 said—poverty, and 1 said—near starvation. Five gave no events leading up. Other, formal aspects of the cards include, as Bellak again suggests, various objects that are either mentioned or ignored by subjects . . . the various structural aspects of the stories multiply as you go from one picture to another. Actually my goal was for thema norms with formal aspects an integral part . . . The task was so overwhelming for one person, so it seemed to me, that I put the preliminary work aside and conveniently forgot it. If there was collaboration on this problem, I think it could certainly be done. My first suggestion is for those interested to exchange ideas on just what ought to be normalized, i.e., what specific points or aspects of stories for each picture should and could be economically tabulated. After sufficient discussion . . . then agreement should be reached and the work begun. I, for one, am a willing volunteer for this project."

As my contribution to the discussion about the specific categories to be scored, I'd like to put in a plug for the descriptive system worked out by Edith Fleming. I and some of my co-workers and students have been applying them to the TATs of psychiatrists and some other professional groups borrowed from Anne Roe. I can report that they are easy to use, comprehensive, and they yield interesting group differences. They might serve as a good starting point for the discussion, once they have become generally available through the ADI.

While I'm on the topic of research here at the Menninger Foundation, it's about time for a quick fill-in about the project on the selection of psychiatrists, first mentioned three years ago in the Newsletter.[2] In accordance with the intention expressed then, Les Luborsky and I started giving 10 (later 11) cards of the TAT to candidates who were being tested and interviewed for psychiatric residencies. The records were filed away; the results were not used in the actual selection of candidates. We set about testing groups of residents known to differ in their psychiatric effectiveness, and on the basis of the many differences found between better and poorer residents, constructed scoring systems. We have given preliminary reports on them at the 1948 and 1949 APA meetings, but only recently have we been able to cross-validate our scoring systems on the original group tested in 1947-1948. The results are surprisingly good. With a group of 34 cases, we obtained a TAT

[2] A full account of the total research project has just been published in the May, 1950 issue of the *Bulletin of the Menninger Clinic* (Luborsky, Lester, Holt, Robert R., and Morrow, William R. Interim report of the research project on the selection of medical men for psychiatric training.)

score that correlates .65 with independent ratings of a man's effectiveness as a psychotherapist, and only a couple of points less highly with overall ratings by supervisors in the Menninger School of Psychiatry. The score is a simple sum of positive and negative cues from three manuals: one for analyzing formal aspects of the stories (prepared by myself), one for aspects of content and one for analyzing the subjects' own interpretations of their stories (the latter two prepared by Les). On the basis of this experience, we have revised and improved all manuals, and are now embarked on a final predictive study in which they will be applied (separately and in combination with manuals for the analysis of other sources of data) to about 65 new cases. Meanwhile, all of our preliminary data suggest that the TAT is better for this task than any other technique we have tried, though the interview hasn't been given a fair test yet.

TATs for Children: The Bellaks' new baby, the C.A.T., was to have been presented last issue, but was crowded out by the bibliography. Since then, news of two more entries in the same field has come to the Newsletter. One was only a proposal, forwarded to me by John Buck from Lynchburg State Colony, Virginia.

> "Recently one of the psychologists in a Mental Hygiene Clinic, which is run under the supervision of the Department of Mental Hygiene and Hospitals of this State, proposed to undertake a study of Thematic Apperception Test cards for use with young children. In all, he has 39 situations involving adults and children in various relationships which he wishes to photograph, and then subject the cards made from the photographs to clinical usage in an attempt to determine the 18 or 20 which will be most productive. In short, he wishes to set up a children's Thematic Apperception Test."

By an interesting coincidence, a very similar project was already under way in Michigan, supported by the State Department of Mental Health. Since the Michigan project was conceived on a larger scale and has been excellently carried out, it is fortunate that it was the one actually put into the field.

The construction and some early normative results for the Michigan Picture Test, as it is being called, were reported at the Orthopsychiatric meetings a few months ago. The paper's authors were Samuel W. Hartwell, Max L. Hutt, Gwen Andrew and Ralph E. Walton; it will appear in the Ortho journal sometime soon, the first of a series of papers and monographs that will set forth this monumental project in detail. Although there is some overlap in the age ranges for which the CAT and the MPT are intended, the latter is in general aimed at a somewhat higher age level, 8 to 14 years. The Michigan test differs from the Bellak pictures

also in that the figures offered for identification are human, not animal. Out of about 1000 pictures, the 20 most useful have been selected, and made into two parallel series which have been administered (complete with electrical recording of responses!) to hundreds of school kids. The state of Michigan apparently means to see the thing through until it's done right, with good normative data on everything from reaction times to psychosexual level of content, for different age levels. If only there were compulsory education for all adults, the original TAT would be able to sport the same kind of norms, too. Someday, somebody will figure out a way to lick the sampling and other technical problems involved; meanwhile, we'll have to carry on with our good old "clinical experience."

New Publications: With a lag of over four months from the time when these words are written and the time when they're read, it's hard to scoop anybody with book news. Everybody must know by now that "The Authoritarian Personality" has finally appeared, with Betty Aron's chapter on need-press and thematic analyses of prejudiced and non-prejudiced subjects' TATs. Some weeks after the Psych Corporation's catalogue listed the Blacky pictures (by Gerald Blum) for sale—$9.00 with manual, record blanks, etc.—one of our staff members came back from a visit to Ann Arbor with a series of hot tips on inside dope, including of course the intelligence that the Blacky test was about to be published! Equally breathlessly, I pass it on to you.

Here's one you *don't* know about though, I bet: van Lennep's *Psychology of Projection* has been translated and is being readied for publication. Charles Elliott and Dagobert de Levie did the translation, and Heinz Graumann and I have offered suggestions. It will be good for American psychologists to have a chance to get better acquainted with the Four Picture Test's author and his original approach to projective techniques.

A Note about the Bibliography: The index to our bibliography had to be deferred until the next issue. By April 10th Charles hadn't yet got hold of all the references that were in my list and not his—not to mention indexing them. It seemed to us better to hold the index up until it could cover the entire bibliography, rather than to publish what was available now, and then to duplicate it later on for the final batch of references. Meanwhile, reprints of the bibliography and accompanying notes are available for the same price as any issue of the Newsletter: twenty-five cents each, even though it is about twice as long as a usual issue. Copies of all back issues are still in print, incidentally, with the exception of the earlier two bibliographies, which are included in the current one anyway.

General Newsletter

The following items are culled from correspondence and from reprints, especially of foreign items, which have come across our editorial desks. They are presented in an informal manner as projective tid-bits; items of news and notes.

Milton S. Gurvitz writes that he recently had occasion to unpack a number of old copies of the Rorschach plates and was surprised to discover that no two editions of the plates were identical. "While many of the differences were small, the differences between the plates imported directly from Switzerland and those published in an American Edition by Grune and Stratton were of such a magnitude that the possibility of these differences affecting clinical results became obvious." His Swiss set, dating from about 1940, is identified on the back by the words: "Arb. z. angew. Psychiatrie, Bd. II. Rorschach: Psychodiagnostik, 2. Auflage Verlag Hans Huber, Bern." The new set was purchased in 1948 and is the set distributed in the United States by Grune and Stratton. Gurvitz continues: "I have compared records taken with both sets on comparative groups of psychopaths and neurotics and it is my clinical impression that such factors as color shock, shading shock and sex shock are differentially affected, that rejections of Card IX (the older Swiss card is a morbidly colored bluish green; the light grey details in the center are totally different in shape and contrast) notably increase with the older set, that the percentage of c responses was higher and that such a detail as the yellow dog in Card X (in the Swiss set the yellow dogs are very dimly outlined) was rarely given. In view of the importance of exactly standardized Rorschach cards and in further consideration of the fact that newer editions of the cards appear to have substantial differences in color, contrast and shading, I would like to suggest that the differences between editions of Rorschach cards be investigated to determine whether they affect clinical results, and would like to inquire whether a closer check could not be made on the commercial reproduction of the blots with perhaps an absolutely exact reproduction under the Society's sponsorship."

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The following short abstracts on projective techniques are from the first issue of a new Brazilian journal, *Arquivos Brasileiros De Psicotechnica,* which is published by the Instituto de Seleccao e Orientacio Profissional, Rio de Janeiro. There are resumes in English.

de Menezes, C. M. "Appreciacao caracterologica de imigrantes atraves do psicodiagnostico miocinetico." This is a comparison of a group of 528 immigrants to Brazil with native norms on the myokinetic test.

Landau, A. "Esudo de certos dados da personalidade de imigrantes atraves do psicodiagnostico miocinetico." A group of 258 immigrants were subjected to the myokinetic test. Normal and disturbed personalities were segregated for independent examination. Relationships were sought between myokinetic patterns and various personality dimensions.

Mira, E., Mira, A., and de Oliveira, A. "Aplicacao do psichodiagnostico niocinetico ao estudo da agressividade." The authors discuss the psychodynamics of aggression. Mira's myokinetic test was administered to groups of 32 Brazilian professional adults, 32 primitive Indians and 40 confined repeat murderers. Statistically significant differences were found among the three groups. The authors conclude that this test enables prediction of aggressive acting-out.

Qunintela, G. "O Rorschach como catarse terapica." The Rorschach is employed as a therapeutic catharsis for anxious patients. Therapeutic as well as diagnostic values are stressed.

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This next item comes from the *Archivos Medicos Mexicanos,* 1948, *6,* 438-478.

Del Doncal, F. P. "Bibliografia sobre el psicodiagnostico de Rorschach." This bibliography describes briefly the contents of 382 references on the Rorschach test. Several languages and countries are represented. No attempt is made to evaluate or synthesize the experimental results.

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The *Revista de Psicologia general y aplicada* is the source of the next two items. They are both from volume four, 1949, pages 437-449 and 259-283, respectively.

Anceline, A. E., Duchene, H., and Schutzenberger, M. "Investigaciones criticas sobre la teoria y el test de L. Szondi." Examination of the Szondi records of several samples of normal adults failed to corroborate Szondi's genetic theory of personality. Internal consistency and validity of the test were found to be low. The personality factors which do appear in the test do not coincide with those of Szondi.

Torrente, A. S. "Clasificacion de las respuestas en la prueba Behn-Rorschach." Scoring samples are presented from a group of 208 adult protocols on the Behn-Rorschach. Comparisons are made with the Rorschach on quantitative features. The bibliography consists largely of foreign publications.

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Dr. Walter Blumenfeld of Lima, Peru, sent an abstract of his article entitled "Una modificacion del test de Rorschach para evidenciar las caracteristicas de la vida activa." This was published in *Revista de Ciencias,* 1948, *50,* 215-226. In this technique, the sub-

ject, after taking the Rorschach test with the usual administration, is asked to make a dozen "Rorschach patterns" of his own; using five water colors. A number of items may be observed: the way of placing the blots (quickly, slowly, blindly, deliberately, etc.); the selection of the colors (which ones? how many?); the quantity, size and shape of the blots; the distribution of the blots on the paper; and others. In a second modification, the subject is allowed to "improve" an already-made pattern, adding new blot parts, for example. The author feels that these two modifications are aids in discovering certain characteristics of personality such as decisiveness, toughness, generosity, frankness, curiosity, etc.

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A reprint was forwarded by Prof. Ferdinando Barison of Ferrara. It is entitled "Contributo sperimentale allo studio dell'affettivita negli schizofrencici: I fenomeni de schock nel reattivo di Rorschach" and appeared in the *Giornale di Psichiatria e di neuropatologia,* 1947. The study has to do with the investigation of color, shading, and movement shock in 37 normal adults, 37 neurotic adults, and 108 schizophrenics. He indicates that the frequency and intensity of the signs of shock are greater in the normals than in the neurotics and greater in the neurotics than in the schizophrenics (although in the schizophrenics there is always the clinical indication of apathy) and relates his rationale for these phenomena.

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We have received a copy of a recent (1949) dissertation for the degree of Doctor of Medicine at the University of Leiden, The Netherlands, by Pieter van den Broek. It is called "Critische en statistiche onderzoekingen betreffende de Behn-Rorschach Test." The study investigates the question of the extent to which the Behn-Rorschach can be considered a parallel test of the Rorschach test. His investigations are devoted largely to R, D, Dd, F+, F−, A%, and the Erlebnistypus. A bibliography of 35 items is listed.

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An experimental note on the use of the Make A Picture Story (MAPS) test in an out-patient clinic was sent to us by Dr. Frampton B. Price and Dr. W. S. Kogan, chief clinical psychologists of the Veterans Administration hospital at Roseberg, Oregon, and the Veterans Administration Mental Hygiene Clinic, Portland, Oregon, respectively. Their study included giving the MAPS test to 31 patients at a V.A. Mental Hygiene Clinic. Their variation of the standard method of administering the materials is to allow the subject to select five backgrounds to which he will respond; the examiner chooses one, usually the Dream. All the backgrounds were used at least twice, except the Cellar which was chosen only once.

They used an inquiry at the conclusion of the test, especially about the fantasied interpersonal relationships. The question of reducing the number of figures is discussed. They summarize their results as follows: "Thirty-one patients at a V. A. Mental Hygiene Clinic were given an abbreviated form of the MAPS test. The use of five backgrounds selected by the patient and one given by the examiner from the twenty-two backgrounds is suggested as a method of administering the test, (instead of the standardized procedure in which the examiner chooses ten backgrounds and the patient selects the eleventh) . . . . The addition of an inquiry and the problem of time saved are discussed. It is felt that the test as presented did not materially alter the adequacy of the protocols. More elaborate comparative studies between full MAPS test and TAT are suggested as a means of evaluating the technique."

ANNOUNCEMENTS

THE SOCIETY FOR PROJECTIVE TECHNIQUES
and
THE RORSCHACH INSTITUTE

ANNUAL MEETING

PRELIMINARY ANNOUNCEMENT

Date: September 5th - 9th, 1950.

Place: The Pennsylvania State College, State College, Pa.

Registration: Every member who attends the A.P.A. meeting is requested to register at the Society's Registration desk which will be located near the main Registration desk.

Program: Individual Papers:

Two sessions of papers contributed by members.

One session co-sponsored with A.P.A. on the Rorschach—Marguerite Hertz, Chairman.

Symposia:

Investigation of Selected Hypotheses Basic to Projective Methods—Ernest Hilgard, Chairman.

Interpretation of the T.A.T.—arranged by Robert Holt. Co-sponsored with A.P.A.

Annual dinner at which the presidential address will be given by Dr. Hallowell.

Meeting of representatives of regional organizations.

Annual Business meeting.

Audrey Schumacher
Chairman, Program Committee
Department of Psychology
University of California
Berkeley, California

"CASE OF GREGOR" REPRINTS AVAILABLE

"The Case of Gregor" is a symposium presented at the American Psychological Association meeting, Sept. 1949, and published in Volume XIII of The Journal of Projective Techniques. It consists of a case history with the protocols of twenty-seven psychological tests, largely projective, and thoughtful and comprehensive interpretations of the following tests by the specialists indicated:

Wechsler-Bellevue and Word Association Test	Roy Schafer
Szondi	Susan K. Deri
Bender-Gestalt	Max L. Hutt
Human Figure Drawing	Karen Machover
Thematic Apperception Test	Morris I. Stein
Rorschach	Bruno Klopfer
Make A Picture Story Test	Edwin S. Shneidman
Horn-Hellersberg Test	Elizabeth F. Hellersberg

The complete symposium is now available as a reprint and is recommended as a supplementary text for courses in projective methods, and as training material in clinical psychology. Test interpretations indicate the empirical bases for diagnostic inferences.

Copies of the reprint are on sale at $1.00 and can be obtained from The Journal of Projective Techniques, 210 East Wilson Avenue, Glendale 6, California.

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